OFFICIAL PLAN OF THE REGIONAL MUNICIPALITY OF OTTAWA-CARLETON

A CONSOLIDATION OF THE OFFICIAL PLAN OF THE REGIONAL MUNICIPALITY OF OTTAWA-CARLETON AS APPROVED BY THE MINISTER OF MUNICIPAL AFFAIRS AND THE ONTARIO MUNICIPAL BOARD OR CABINET.

OFFICIAL PLAN
OF THE REGIONAL MUNCIPALITY OF OTTAWA-CARLETON
CONSOLIDATION - DECEMBER 31, 1985

This is a consolidation of the Regional Official Plan as adopted under By-law 184 of 1974 by Regional Council 9 October 1974, approved and modified by the Minister of Municipal Affairs and Housing 30 August 1976, modified by the Ontario Municipal Board's Issuing Order 11 October 79, 31 July 80 and 29 October 81 and amended by amendments 1 through 32, 34, 38, 40, 41, 43, 47, 49, 50, approved by the Minister of Municipal Affairs and Housing and/or the Ontario Municipal Board or Cabinet. This is a consolidation provided for convenience only. Reference should be made to the original, certified documents which are on file in the Clerk's Department, 14th floor, 222 Queen St. Ottawa, Ontario K1P 5Z3.

For proper and easy referencing, notations have been provided wherever changes to the original text have been made. These notations appear in short form and refer to the amending and modifying documents listed below.

MODIFYING/AMENDING DOCUMENT	FORM USED IN NOTATIONS
Modifications made by the Minister of Municipal Affairs and Housing 30 August 1976 concurrent with the approval of certain parts of the official plan.	Ministerial Modification (Nos. 1-15), 30 Aug., 1976
The final Issuing Order of the Ontario Municipal Board, as amended, dated 11 Oct. 1979, encompassing the decision of the Board as well as the changes directed by the provincial cabinet, and a subsequent order, dated 29 Oct. 1981, concerning a section referred back to the OMB for a rehearing (Eastgate).	OMB ORDER (Nos. 1-70) 11 Oct 1979 OMB ORDER 29 Oct 1981

Approved Official Plan Amendments	By-law No.	Date Approved By Minister or OMB
Amendment 1	16 of 1977	30 August 1979
Amendment 2	73 of 1977	21 August 1977
Amendment 3	133 of 1978	01 March 1979
Amendment 4	29 of 1978	08 May 1978
Amendment 5	147 of 1979	06 June 1980
Amendment 6	126 of 1978	23 April 1979
Amendment 7	152 of 1978	05 October 1981
Amendment 8	45 of 1979	24 October 1979
Amendment 9	06 of 1980	10 February 1981
Amendment 10	114 of 1980	08 October 1980
Amendment 11	95 of 1979	14 February 1980
Amendment 12	126 of 1979	22 August 1983
Amendment 13	140 of 1979	28 July 1980
Amendment 14	148 of 1979	06 June 1980
Amendment 15	61 of 1980	26 August 1980
Amendment 16	131 of 1980	14 July 1981
Amendment 17	166 of 1980	02 February 1981

Approved Official Plan Amendments	By-law NO.	Date Approved By Minister or OMB
Amendment 18	96 of 1981	17 June 1982
Amendment 19	112 of 1980	14 October 1981
Amendment 20	188 of 1980	30 December 1985
Amendment 21	200 of 1980	05 August 1981
Amendment 22	46 of 1983	26 May 1983
Amendment 23	164 of 1981	19 April 1982
Amendment 24	78 of 1981	07 January 1983
Amendment 25	163 of 1981	13 March 1985
Amendment 26	181 of 1982	09 February 1983
Amendment 27	76 of 1982	28 July 1982
Amendment 28	112 of 1982	10 March 1983
Amendment 29	111 of 1982	01 September 1982
Amendment 30	154 of 1982	16 March 1983
Amendment 31	133 of 1983	27 December 1984
Amendment 32	136 of 1982	09 December 1982
Amendment 34	278 of 1982	09 May 1983
Amendment 38	1 of 1983	01 March 1983
Amendment 40	87 of 1984	11 December 1984
Amendment 41	88 of 1984	23 October 1984
Amendment 47	4 of 1985	20 February 1985
Amendment 49	35 of 1985	10 September 1985
Amendment 50	121 of 1985	29 July 1985

In addition to the approved amendments listed above, the following amendments have been adopted by Regional Council and are pending approval. To have access to these amendments, contact the Public Participation Group, 8th Floor, 222 Queen Street, Ottawa, 560-2053.

Amendments Adopted & Pending Approval	By-law No.	Date of Council Adoption
Amendment 43	214 of 1984	14 November 1984
Amendment 48	143 of 1985	12 June 1985
Amendment 52	258 of 1985	23 October 1985
Amendment 53	259 of 1985	23 October 1985

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PART 1

1.0 PRINCIPLES AND AIMS

1.1 THE PLANNING AREA

The policies of this plan are directed to creating an environment within which the physical, social and mental well-being of all persons who live in the planning area can be advanced. The planning area consists of the whole of the Regional Municipality of Ottawa-Carleton and includes the Cities of Gloucester, Kanata, Nepean, Ottawa and Vanier; the Village of Rockcliffe Park; and the Townships of Cumberland, Goulbourn, Osgoode, Rideau and West Carleton.
[OPA #30, 16 MARCH, 1983, SECTION 1.1 IN PART]

The planning area comprises approximately 2,800 square kilometres of Eastern Ontario adjacent to the Province of Quebec. Part of the planning area is included in the National Capital Region. Map 1 shows the location of the planning area in relation to Eastern Ontario and Western Quebec.

1.2 PLANNING FOR THE FUTURE

While physical well-being depends upon the adequate provision of the necessities of life -food,clothing, shelter, and health - the manner and amount in which these neccessities are provided affects the social life of the community and the psychology of the individual. This plan, therefore, is concerned not only with creating an environment in which adequate housing, health, education, and cultural and recreational facilities may be provided in a safe and healthy way, but in seeing to it that a satisfying and stimulating environment can evolve. This environment should give adequate opportunity for a full family and social life as well as afford privary for the individual.

In order to provide the opportunity for a variety in ways of living within the planning area, Council accepts as basic objectives the provision of a choice of residential communities containing a wide range of types, styles and densities of housing; the provision of a variety of working environments; and the provision of a choice among social and cultural activities and the various methods of travel and communication.

Council believes that the appearance and quality of the physical environment is fundamental to the well-being of the population. Therefore, development that takes place in the planning area should meet needs arising from population, social, economic, and technological trends in a manner that protects cultural, visual, and ecological qualities of the environment.

In the existing built-up areas, the desirable characteristics of present communities must be protected, historic and architecturally significant structures preserved, and high standards of aesthetics and sound design principles applied to ensure satisfying pleasant and dignified surroundings.

Because of the close proximity of the Communauté Régionale de l'Outaouais to the planning area, because of the similarity in the boundaries of the two regions and those of the National Capital Region, and because the planning area is part of the Eastern Ontario Development Region

for which the provincial government is preparing an economic development plan, many decisions other than those of Council can be made which affect development in the planning area. Therefore, Council recognizes the need for close liaison and cooperation between the two regions, the National Capital Commission, and the two provincial governments. It is Council's intention that there should be compatibility between the published plans of these bodies. To that end, a committee on which all of these bodies are represented was formed in December 1973, which is intended to coordinate development and transportation proposals for the whole area.
[OPA #30, 16 MARCH, 1983, SECTION 1.2 IN PART]

Because it contains the seat of the federal government, the planning area should have a major symbolic significance to the nation, reflecting its history, heritage, and national character and appealing to all Canadian cultures. The capital must be a source of pride to Canadians and set ambitious standards of urban grace and vitality.
[OPA #30, 16 MARCH, 1983, SECTION 1.2 IN PART]

By cooperative and careful planning, officies, facilities, and monuments that are required in coming decades can be built in a way that satisfies regional and national goals. The provision of accommodation for visitors and for national and international organizations locating in the capital affords further opportunity for developing a distinctive urban environment.

Policies contained in this plan support creating an image for the core of the Region which will reinforce its identity and symbolic significance and achieve the high ideals and expectations that would be expected of the national capital. As well as the policies that Council will itself pursue to obtain this objective, Council will cooperate with other governments in developing and applying effective regional, urban and community design principles to achieve these goals for the nation's capital.

Council also recognizes the desire by residents to influence the future of their local communities and the community at large. The effect of policies set out to fulfil the objectives discussed above shall not prejudice the established sense of community that is identified with residential neighbourhoods. The review of policies in this plan will be undertaken in consultation with area municipalities, planning boards, and residents of the area.

1.3 ACHIEVING THE AIMS

Council has the responsibility for enacting legislation and making decisions affecting many aspects of development in the planning area. It is, therefore, one of the principal bodies working towards the fulfillment of the regional community's aims. By the way it exercises its direct responsibility in providing water supply, sewage disposal, public transport, roads, and health and welfare services, it can influence the shape and type of community significantly. Continual liaison with public and private agencies involved in development of the planning area and coordination of their activities will also assist in achieving the aims of this plan.

The concerted effort of the Regional Municipality will, therefore, have to be matched by policies and programs of other governments as well as by the actions of individual residents and private corporations if the aims are to be

achieved.

Council's exercise of its planning powers is largely conducted through the medium of this Official Plan. As provided by The Planning Act, this plan has legal force. No by-law may be passed and no municipal work carried out if it conflicts with the plan. Also, as provided in the Regional Municipality of Ottawa Carleton Act, existing restricted area by-laws and official plans within the planning area must be amended to conform with this plan.

The plan is a statement of Regional Council setting forth its major policies concerning desirable future physical development. Equally important, it is a means of expressing the goals and concerns of the choices available to the people of the region, and the necessary guidelines to meet the requirements of growth. Hence, in addition to its legal force,the plan can be administered to fulfill a guiding and persuasive function.

1.3A PLANNING HIERARCHY IN THE REGION

A hierarchy of planning is established within the Region. The roles and responsibilities of the Region and the area municipalities within this planning framework are generally identified herein.

The Regional Plan is a strategy for development of the entire Region. The level of detail in this strategy plan is sufficient to reasonably ensure achievement of the regional objectives of this plan.

However, local official plans, covering the whole of each area municipality are essential in order to direct development in accordance with regional objectives and local desires, and to fully implement the policies of this plan.

These local official plans shall contain more detailed land use distributions and policies relating to, among other things, densities, housing mix, servicing and phasing. The level of detail of these plans shall be sufficient to ensure the adequate implementation of local and regional policies and enable the preparation of development proposals and zoning by-laws for specific areas. These plans shall be approved in accordance with The Planning Act.

In certain circumstances, these local plans may not be sufficiently detailed to achieve this end, in which case secondary plans, elaborating on specific areas, for example future urban communities and redevelopment areas, shall be prepared. However, secondary plans shall be used to supplant the proper functions of local official plans.

Secondary plans, where required, shall detail such matters as land use patterns, location of types and densities of dwelling units, transportation network, servicing programs, and phasing. These secondary plans shall be adopted by resolutions of the area municipal and regional councils outside the requirements of The Planning Act.
[MINISTERIAL MODIFICATION, NO. 1, AUG 30, 1976, SECTION 1. 3A ALL]

[OPA #27, 28 JULY, 1982 SECTION 1.3A IN PART]

1.4 PRIORITIES AND GOALS

It should be emphasized that all aims cannot be fully attained since planning for regional development involves the reconciliation and balancing of diverse objectives

with limited resources and in circumstances that are complex. Choices must therefore be made regarding the relative importance of the aims and needs of the community.

Council recognizes seven principal areas of concern; enhancement of the physical environment, furthering the sense of social well-being, providing transportation and utility services, developing economic opportunity, conserving energy and the practicability of financing and arranging programs of works to achieve the objectives. [OPA #34, 9 MAY, 1983 SECTION 1.4 IN PART]

For each of these seven areas, a major goal and several more specific goals are accepted. These are set out in Table 1-1. From the extensive discussion which has taken place about these goals with the public and from the many views that have been received relating to them, a consensus has developed that those goals dealing with social well-being and physical environment take first place in terms of priority, followed closely by the provision of services; considerations of financing and implementation come next, and the development of the economic base ranks lowest. [OPA #34, 9 MAY, 1983, SECTION 1.4 IN PART]

The goals and sub-goals outlined above have been used in the analysis leading to the proposals elsewhere in this plan. Not all goals considered have been fulfilled in their entirety, e.g. not every hectare of land with a high potential for agriculture is proposed for agricultural uses in this plan. Compromises have had to be made because conflicts arise between goals.

1.5 THE OFFICIAL PLAN

The Official Plan consists of six parts of which this is the first. The other parts cover the following topics:

Part 2: Scale and Structure of Growth, including the scale and location of urban and rural population growth and employment.

Part 3: Transportation and Utilities, including roads, public transit, and utilities.

Part 4: Cultural Resources and Community Facilities, including aesthetic and visual quality, historic buildings, and community facilities.

Part 5: Natural Resources, including agriculture, conservation and recreation and environmental management.

Part 6: Implementation.

TABLE 1.1

GOALS FOR THE REGION

1 SOCIAL WELL-BEING	2 PHYSICAL ENVIRONMENT	3 SERVICES		4 IMPLEMENTATION	5 FINANCE	6 ECONOMIC BASE	7 ENERGY
		1-TRANSPORTATION NETWORK	2-UTILITIES				
MAJOR GOAL • TO CREATE A SAFE HEALTHY AND STIMULATING ENVIRONMENT WHERE EACH INDIVIDUAL CAN PURSUE HIS DAILY ACTIVITIES TO HIS BEST ABILITY AND POTENTIAL	**MAJOR GOAL** • TO DEVELOP PROTECT AND ENHANCE THE QUALITY OF THE PHYSICAL ENVIRONMENT TO PROVIDE FOR THE CHANGING NEEDS ARISING FROM POPULATION SOCIAL ECONOMIC AND TECHNOLOGICAL TRENDS AND TO ENSURE ITS RATIONAL DEVELOPMENT WITH MINIMAL DISTURBANCE TO THE ECOLOGY	**MAJOR GOAL** • TO DEVELOP A SAFE CONVENIENT AND EFFICIENT TRANSPORTATION SYSTEM WHICH OPTIMIZES ACCESSIBILITY FOR ALL PERSONS AND GOODS WITH MINIMUM DISRUPTION TO THE ENVIRONMENT	**MAJOR GOAL** • TO DEVELOP AN ADEQUATE AND EFFICIENT PUBLIC UTILITIES SYSTEM CONSISTENT WITH POPULATION AND TECHNOLOGICAL TRENDS	**MAJOR GOAL** • TO DEVELOP A PROGRAM TO FACILITATE THE COORDINATED IMPLEMENTATION OF THE PLAN TO ACHIEVE IDENTIFIED GOALS PROVIDING FOR CONTINUAL EVALUATION AND UPDATING AND TO ENSURE THAT THE REGIONAL PLAN IS COMPATIBLE WITH THOSE OF THE LARGER COMMUNITIES	**MAJOR GOAL** • TO DEVELOP THE REGION AT A MINIMUM COST WITH MAXIMUM SOCIAL BENEFIT IN ACCORDANCE WITH ITS FINANCIAL CAPABILITY TO MEET IDENTIFIED NEEDS	**MAJOR GOAL** • TO DEVELOP THE REGION TO A LEVEL OF ECONOMIC DEVELOPMENT COMPATIBLE WITH MAJOR GOALS 1-5	**MAJOR GOAL** • TO DEVELOP THE REGION IN A MANNER WHICH USES ENERGY EFFICIENTLY AND MAXIMIZES ENERGY CONSERVATION WHEREVER POSSIBLE
SPECIFIC GOALS • TO PROVIDE FOR ADEQUATE HOUSING OF ALL TYPES ACCESSIBLE TO ALL SEGMENTS OF THE POPULATION • TO PROVIDE ADEQUATE FACILITIES FOR HEALTH, EDUCATION, SOCIAL WELFARE, CULTURE AND RECREATION • TO MINIMIZE EXPOSURE TO ADVERSE ENVIRONMENTAL INFLUENCES • TO OPTIMIZE SAFETY AND CONVENIENCE IN ALL ASPECTS OF LIVING • TO MAXIMIZE THE RANGE OF CHOICE OF TYPES OF LIVING AND WORKING ENVIRONMENTS AND FACILITIES, IN ORDER TO PERMIT MAXIMUM VARIETY OF LIFE STYLES • TO ENHANCE THE CULTURAL AND HISTORIC HERITAGE OF THE REGION • TO MAXIMIZE THE RANGE OF EMPLOYMENT OPPORTUNITIES • TO PROVIDE FOR OPTIMUM SOCIAL INTERACTION • TO MINIMIZE DISRUPTION TO ESTABLISHED COMMUNITIES	**SPECIFIC GOALS** • TO PRESERVE AREAS OF HIGH CONSERVATION VALUE • TO PROVIDE ADEQUATE PROTECTION TO PLANT AND ANIMAL LIFE • TO PROTECT GOOD AGRICULTURE AND FOREST LAND • TO PRESERVE AND ENHANCE AREAS OF HIGH LANDSCAPE HISTORIC SCENIC AND RECREATIONAL VALUE • TO CONTROL ALL FORMS OF ENVIRONMENTAL POLLUTION • TO ACCOMMODATE ALL ACTIVITIES EFFICIENTLY AND IN SUITABLY LOCATED AREAS • TO ENSURE HIGH AESTHETIC QUALITY BY APPLYING SOUND URBAN DESIGN PRINCIPLES THROUGHOUT • TO ENSURE RESPECT FOR AND HARMONY WITH THE NATURAL ENVIRONMENT • TO ENSURE ABILITY OF EXPANSION OF URBAN DEVELOPMENT BEYOND THE PLANNING PERIOD • TO EMPHASIZE THE ROLE OF THE NATION'S CAPITAL	**SPECIFIC GOALS** • TO OPTIMIZE ACCESSIBILITY TO EMPLOYMENT HOUSING AND ALL FACILITIES IN THE REGION • TO MINIMIZE TIME AND COST OF MOVEMENT OF PEOPLE AND GOODS • TO DEVELOP A SYSTEM ADAPTABLE TO EMERGING AND PROBABLE CHANGES IN TECHNOLOGY AND CAPABLE OF EXPANSION TO ACCOMMODATE GROWING NEEDS • TO PROVIDE CHOICE OF ALTERNATIVE MODES OF TRAVEL • TO MINIMIZE DISRUPTION AND INCONVENIENCE TO ESTABLISHED AND FUTURE NEIGHBOURHOODS • TO DEVELOP A NETWORK CONSISTENT WITH IDENTIFIED ENVIRONMENTAL REQUIREMENTS AND RESTRAINTS • TO PROVIDE FOR *THE INTERREGIONAL MOVEMENT OF PERSONS AND GOODS	**SPECIFIC GOALS** • TO PROVIDE FOR THE EFFICIENT DISPOSAL AND TREATMENT OF ALL DOMESTIC AND INDUSTRIAL WASTES • TO DEVELOP AN EFFICIENT WATER DISTRIBUTION SYSTEM • TO PROVIDE FOR ADEQUATE AND EFFICIENT TELECOMMUNICATIONS AND ENERGY SERVICES	**SPECIFIC GOALS** • TO DEVELOP AN ADMINISTRATIVE PROCEDURE AND AN ORGANIZATION TO FACILITATE THE IMPLEMENTATION OF THE PLAN • TO ALLOW FOR ADEQUATE FLEXIBILITY TO ACCOMMODATE CHANGING NEEDS • TO ADOPT A PLAN WHICH FACILITATES IMPLEMENTATION • TO DEVELOP A FRAMEWORK FOR LOCAL PLANNING • TO PROVIDE FOR CITIZEN PARTICIPATION AT ALL STAGES OF PLANNING AND IMPLEMENTATION	**SPECIFIC GOALS** • TO MINIMIZE THE COST OF ALL REQUIRED SERVICES AND FACILITIES CONSISTENT WITH OVERALL BENEFIT • TO OPTIMIZE THE USE OF ALL EXISTING FACILITIES • TO MINIMIZE FINANCIAL LOSSES OF DISRUPTIONS CAUSED BY THE CONSTRUCTION OF FACILITIES • TO PROVIDE REGIONAL SERVICES IN ACCORDANCE WITH FINANCIAL CAPABILITY • TO INTEGRATE THE DEVELOPMENT OF THE REGION WITH FEDERAL AND PROVINCIAL SUBSIDY PROGRAMS	**SPECIFIC GOALS** • TO ENSURE THE EXPANSION OF THE REGION'S ECONOMIC BASE CONSISTENT WITH ITS FULL POTENTIAL AND IN ACCORDANCE WITH WIDER ECONOMIC FACTORS AND CONSIDERATIONS • TO PROVIDE FOR DIVERSIFICATION IN THE ECONOMIC BASE • TO ACHIEVE AN OPTIMUM BALANCE IN THE ECONOMIC STRUCTURE OF THE REGION • TO PROTECT AND DEVELOP THE NATURAL RESOURCES OF THE REGION	**SPECIFIC GOALS** • TO ACHIEVE ENERGY EFFICIENCY IN MUNICIPAL OPERATIONS • TO DEVELOP ENERGY CONSERVING PATTERNS OF LAND USE • TO MAXIMIZE USE OF ENERGY EFFICIENT MODES OF TRAVEL, SUCH AS PUBLIC TRANSIT, WALKING AND BIKING • TO PROMOTE RECYCLING AND WASTE HEAT RECOVERY PROGRAMS • TO ENCOURAGE INNOVATION RELATING TO EFFICIENT ENERGY USE [OPA #34, 9 May, 1983, Table 1.1]

PART 2

2.0 SCALE AND STRUCTURE OF GROWTH

2.1 SCALE OF FUTURE GROWTH

2.1.1 PERSPECTIVE

In the twenty year period 1951-71, population and employment in the planning area almost doubled while the number of households increased by one hundred and thirty-four percent. The Ottawa-Hull metropolitan area, of which the urbanized section of the planning area is part, is the fourth largest metropolitan area in the country and is expected to be affected by the general trend to increasing urbanization.

This trend has been analyzed in a number of studies. It indicates that, if economic growth continues in much the same way as in the recent past, and taking into account the employment base and size of existing cities:

- The population of Canada will increase from 21.5 million in 1971 to perhaps 38 million at the turn of the century - an increase of about 75%.
- The population living in the twelve largest cities will increase from 8.6 million to 24.8 million, an increase of nearly 200%. Thus almost 75% of Canada's population will live in these major cities.
- Montreal and Toronto will have populations of the order of 6 million persons, while Vancouver will be near the 2.5 million mark.
- Quebec City, Hamilton, Edmonton, Winnipeg and Ottawa-Hull will have populations of between 1 and 1.5 million.

Growth in the planning area is related to future population growth in the country and to a lesser extent in the world. A change in the rate of growth and the level of population in the planning area will affect other urban areas in Canada. The actual rate of growth in the planning area will depend primarily upon the policy of the federal government, secondarily on policies of the provincial government, and to a lesser extent on municipal policies. Studies in the National Capital Region have concluded that population will reach a level of between 1 and 1.5 million by the early part of the twenty-first century, based on:

- The nature of employment, which is predominantly in government and other service occupations. The increasing demand for such services and their labour-intensive characteristic is likely to lead to a rapid increase in job opportunities.
- The urban area is of sufficient size to naturally generate and attract employment because the local market can support additional services.

For the purpose of this plan it is assumed the economy of the country is likely to develop in the future in a way similar to that of the recent past. However, the assumptions for this plan also recognize that it is not certain that population and employment growth in the planning area will continue at the same rate as in recent years. Policies of the federal government as well as changing attitudes towards work, birth control, and the consumption of energy and resources will influence the rate of growth. There is also a body of opinion developing that, even if growth of the order of magnitude previously discussed does come about in the country, it should be distributed differently than if current economic trends were followed. If this opinion is confirmed and is possible of being made effective, the redistribution of national and provincial urban development could occur over the long term. If this comes about, the prospect for the planning area would be substantially changed and would have to be reviewed.
[OPA #30, 16 MARCH, 1983, SECTION 2.1.1 IN PART]

The two conflicting aspects towards growth - recent trends supporting the assumption of an increasingly large urban population within the planning area and a concern with whether growth of this order should take place - create a dilemma, particularly as there are few opportunities to control the rate of growth, and those which show promise are available to other than the municipal level of government.

The main employer in the planning area is the federal government. The current building program of the Canadian Government in the Capital provides for continued building to house increasing numbers of federal employees until the early 1980's. With this commitment and the understanding that major changes in public policy, such as the location of government functions in other Canadian centres would take several years to achieve, Council believes this plan should make provision for urban growth at current rates for a period of not less than ten years, and for needs that may arise beyond that period on the assumption that a population of 1,000,000 in the planning area may be reached. However, it is recognized that there is a major concern with regard to continued urban growth in the planning area.
[OPA #30, 16 MARCH, 1983, SECTION 2.1.1 IN PART]

Periodic review of this plan will consider the consequences of alternative growth rates, the possibilities of influencing growth rates, and the effect of changes in the rate of achieving the goals and objectives for development of the planning area.

It is also desirable, in Council's opinion, to have set out in this plan a time-frame for the future within which it appears most likely that certain thresholds will be reached in the level of total population in the planning area. This will facilitate the coordination of activities of provincial and municipal governments and agencies, and provide reference, that can be measured against actual experience, for staging and timing the implementation of this plan.

If population increases at the same rate as experienced in the period 1961-71, a threshold of one million persons will be reached in 1998. If population increases by the same numerical amount each decade as experienced in the period 1961-71, the same threshold will be reached in 2015. The effect of these rates of growth on the time at which specified population thresholds will be attained is shown in Table 2-1. Also shown is the median rate.

Table 2-1
Year Population Thresholds Attained: Alternative Growth Rates

Population Level	Year Reached		
	With Constant Percentage Increase	Median	With Constant Numerical Increase
471,931		1971	
600,000	1980	1981	1982
750,000	1988	1991	1994
1,000,000	1998	2006	2015

It is intended that the foregoing table be for reference only. It does not reflect any objective of this plan.

Therefore Council proposes:

(1) To base its long term planning strategy on a population threshold consitent with recent forecasts for the planning area. Accordingly this plan is based on the assumption that population in the planning area could increase to one million persons in approximately 30 years.

(2) That periodic review of this plan shall incorporate an assessment of different policies that might be available to reduce or accelerate the rate of growth in the planning area on the goals and objectives of this plan.

2.1.2 LAND AREA REQUIRED

The total land area that would be required for urban purposes at a threshold population of one million mainly depends upon:

- The densities of living and working areas.
- The amount of land used as major open space within the urban area.
- The amount of land used by major institutions.
- The amount of vacant land within the urban area.

These factors vary from place to place and over time. However, there is a degree of consistency in the relationship between the number of people living in the urban area and the density at which they live, the amount of land needed for specific urban uses and the total amount of land used for all urban purposes.

If these relationships were constant, and Ottawa, typical of cities in Ontario*, the number of hectares required for urban purposes in the planning area would increase from 14,000 hectares at approximately half a million population to 24,000 hectares at one million persons. However, recent trends have been towards higher residential densities. This will probably continue with the result that the area required for urban purposes at a threshold population of one million will be less than 24,000 hectares. Furthermore, the Ottawa urban area is not typical of Ontario cities because:

- The type of employment in the planning area, mainly office and service-oriented, develops at higher densities than industrial employment, of which there is relatively little in the planning area.

- The extensive use of the greenbelt for urban uses reduces the need to provide such facilities as part of the urban area, e.g. airport, defence establishments, institutions such as the jail, and recreation uses.

- There is a relatively large amount of non-urbaninized land within the urban area, e.g. the Central Experimental Farm, Rockcliffe Airbase.

- There is a relatively large amount of open space either developed for recreation purposes, e.g. the Ottawa River Parkway, or in surroundings to government buildings.

The first two factors would tend to cause the amount of land used for urban purposes in the planning area to be less than the average for Ontario; the latter two factors would tend to cause it to be more.

*See "Urban Land Use in Ontario, Areas and Intensities", Department of Municipal Affairs, Ontario.

In 1970 the urban area* which was occupied by urban uses totalled 11,700 hectares. The population within that area was approximately 403,000 persons, which is a density of almost 34.4 persons per hectare. This is lower than other large Canadian urban areas (Hamilton 38.3, Metro Toronto 39.5, Metro Montreal 45.7).

Gross urban densities in major Canadian cities in 1971 were very varied. Much of this variation is because the boundaries of municipalities are not contiguous with their urbanized areas resulting in differing amounts of vacant land within municipal boundaries.

Table 2-2
Gross Urban Densities of Major Municipalities 1971 [a]

	Population	Land Area Hectares	Density Persons / Hectares
Montreal City	1,214,352	15,790	76.9
Toronto City	712,786	9,715	73.4
Hamilton City	309,173	12,280	25.2
Winnipeg City	246,246	7,905	31.2
Vancouver City	426,256	11,305	37.7
Montreal Island	2,187,153	73,900	29.6
Metro Toronto	2,086,017	62,585	33.3
Ottawa City	302,341	11,015	27.4

[a] Statistics Canada, 'Geography', 1971 Census Bulletin SG-1.

Also densities of living and working areas vary from city to city. However, with the exception of Toronto and Montreal, which are both old, established, and almost completely built-up cities, gross urban densities in major Canadian cities are between 25 and 37 persons per hectare. In the City of Ottawa, gross urban density is 38.1 persons per hectare if large areas of vacant of non-urbanized land are not considered. Bearing in mind the trend to increasing densities and recognizing that the greenbelt will provide a location for some urban activities, a gross urban density of approximately 37 persons per hectare appears an acceptable assumption on which to base overall land requirements for this plan. Assuming one-tenth of total population is located in rural portions of the planning area, 900,000 people will be located in the urban area when a threshold population of one million persons is reached. A density of 37

*Defined as the area served by central water and sewer services.

persons per hectare results in a need for 24,000 hectares of urban land. The area within the inner limit of the greenbelt, including Bells Corners and Blackburn Hamlet, is 18,200 hectares. Because there are major areas which are not expected to develop within the planning period, notably the Experiemental Farm and CFB Rockcliffe, gross urban density within the greenbelt is expected to be approximately 37 persons per hectare. Outside the greenbelt approximately 6,100 hectares of land will required for urban purposes.
[OMB ORDER, NO. 1, 11 OCTOBER, 1979, SECTION 2.1.2, IN PART]

- Council therefore considers that an urban area of approximately 24,000 hectares will be required if a population threshold of one million persons is reached in the planning area.

2.2 THE STRUCTURE AND LOCATION OF FUTURE GROWTH

An approximate doubling of both population and land used for urban purposes will have implications for present and future inhabitants of the planning area. It will affect the attractiveness of the environment as a whole, as well as the more immediate environment in which people live and work; it will affect ease of communications; it will affect social costs and benefits. How future urban growth is structured and located will have significantly different implications in the foregoing respects. Accordingly, the proposals contained in this plan have been derived following examination of a wide range of options. Altogether eight substantially different ways of structuring urban growth were considered before the structure on which this plan is based and the locations for future urban development were selected.

2.2.1 STRUCTURE OF FUTURE URBAN DEVELOPMENT

The eight concepts* that were examined in developing this plan ranged from a postulated concentration of most development in an area limited by the outer limits of the greenbelt, to a dispersed, essentially unstructured pattern by which a large part of the planning area would become urbanized.

Each concept was assessed against the goals and subgoals established for this plan. Criteria were developed that permitted a measurement or judgment to be made on the extent to which the concepts met the goals and sub-goals; various weightings applied to goals and sub-goals determined that there was consistency in the rating of each concept according to the established goals.

*"Report on Formation and Preliminary Evaluation of Alternative Regional Development Concepts", 1971.

It became clear that the principal benefits of concentrated development are the generation of additional employment, greater opportunities for outdoor recreation, a general increase in the vitality of the urban area, and greater possibilities for preserving farmland and conservation areas. Compactness avoids urban sprawl and minimizes adverse effects on the surrounding environment. These benefits however have detrimental effects after certain densities are reached: facilities and services become costly, land prices rise, pollution (noise, air, and water) are difficult and costly to control, and transportation costs become very high. Also established communities must undergo substantial change, and the pressures for redevelopment of historic and unique areas become great. Furthermore it is difficult to create socially coherent communities, encourage social interaction, or develop a variety of life styles.

Low density, dispersed development overcomes most of these disadvantages, but generates others. In particular, it is not economically feasible to provide a high standard of services and facilities throughout scattered developments. Pollution is difficult to control. Most travel is tied to the automobile. This type of development uses more land for urban purposes and therefore adversely affects natural resources.

The four concepts at the high and low density ends of the scale were rejected and it was determined that a medium density urban structure would provide the best solution for the planning area. There were four concepts of this type:

(1) Satellite concept with relatively large towns outside the greenbelt and with a large amount of employment located in the towns. The automobile is the primary mode of travel except in journeys to the central area where there is greater use of transit.

(2) Corridor concept with linear development in corridors each served by high speed transit to the central area. Redevelopment of existing areas and development of vacant land to higher densities within the corridors result in a more compact urban area. Employment tends to be concentrated in the corridors and the central area. There is much greater dependence on public transit than in the satellite concept.

(3) Urban Freeway concept, with a number of relatively small towns located close to freeways leading to the urban area. The towns can support little employment and result in a community heavily reliant on private automobiles.

(4) Commuter Rail concept, with a number of relatively small towns located on railways which would provide commuter rail service. The demand for urban freeways remains, but is less pronounced. The commuter rail service would require interchange with an urban rapid transit system for access to the Central Area.

Concept 3 was discarded because of its excessive reliance on urban freeways. Potential difficulties can be foreseen in providing either Concept 3 or Concept 4 with sewer and water services. Concept 1 and 2 are considered to have most merit and form the basic urban structure on which this plan is based.

Elements of both concepts have been used in arriving at this plan. The satellite concept provides the basis for urban communities, the retention of the greenbelt, and for the recommended distribution of employment. The corridor concept provides the basis for reliance on public transit and the location of future activity centres along transit lines.

Council considers that regional objectives will be best met if the population living in the rural part of the planning area grows at approximately the same rate as the region as a whole so if the one million threshold is reached approximately 100,000 persons will live in the rural parts of the planning area. This will meet, in addition to the residential requirements of the rural area itself, the desire of some other members of the regional community to live in rural surroundings. At times during the planning period it is possible that the demand for housing in the rural area may exceed the amount that would be provided by maintaining the level suggested above. However, it is considered inadvisable to attempt to satisfy essentially urban housing needs within the rural area because a substantially larger rural population than that proposed could:

- be difficult to provide with a complete range of community facilites,
- lead to social disruption in the rural area, particularly in the existing villages,
- have an adverse effect on the natural environment and lead to public health and safety problems,
- frustrate creation of the desired distribution of employment
- interfere with farming
- place too great a reliance on private automobile travel and defeat the public transit objectives of this plan.

The population levels within the greenbelt at full development could vary between approximately 600,000 and 750,000 and provide suitable living conditions. The main considerations that enter into determining the most appropriate level are:

- the amount of redevelopment desired within existing residential communities and desired to support public transit system,
- the variation in expected or actual household size in the future, which would affect the quantity of housing that would have to be provided to attain any given population level,
- the effect of any given level on the supply of housing types,
- the effect on the rate of growth and type of communications to be created outside the greenbelt.

The most important determinants with regard to the number and size of urban communities outside the greenbelt are:

- Population is growing at approximately 12,000 persons per year. This places a limit on the number of people who can live in the urban communities. It also restricts the number of locations which can be developed and have adequate facilities and services provided at an early stage of their development.

- The necessity that a large number of jobs locate in the urban communities and that appropriate policies be adopted by Regional Council in order to ensure the creation of a sufficient number of local work opportunities to establish two way use of the transportation system. While it is recognized that the attraction of jobs is related to the size of the community additional incentives and controls will be required in order to maintain an acceptable ratio between residential population and local work opportunities throughout the course of development of the urban communities outside the greenbelt.

- The desire to have major employment centres serviced by the rapid transit system and for that system to serve the urban communities outside the greenbelt. The high cost of constructing rapid transit would prevent this service being available to many communities.

- The limited financial resources of both regional and area municipalities. This suggests a full range of urban services and facilities should be directed to a limited number of urban communities rather than a partial range to many areas.

- The goal of social well-being, with its sub-goals relating to the provision of services and facilities, was weighted most highly throughout this analysis.

Accordingly, Council concludes that there should be a limited number of urban communities outside the greenbelt of a size sufficient to support a high level of employment. Bearing in mind experience in other countries, a population of approximately 75,000 to 100,000 is considered appropriate, where adequate transportation and employment are provided.
[OMB ORDER, NO. 28, 11 OCTOBER, 1979, SECTION 2.2.1, IN PART]

The main objectives of this plan for population distribution at the time when a threshold of one million may be reached are therefore:

1. The complete urbanization of land within the inner limit of the greenbelt, including redevelopment which would account for 50,000 new housing units. This would provide for 790,000 persons if household size remains constant but more likely 630,000 persons if, as expected, the decline in household size continues.

2. The development of a limited number of urban communities outside the greenbelt, each in the neighbourhood of 75,000 to 100,000 persons and providing for 270,000 to 300,000 persons in all.
[OMB ORDER, NO. 28, 11 OCTOBER, 1979, SECTION 2.2.1, IN PART]

3. An increase in population in the rural part of the planning area to approximately 100,000 persons.

2.2.2 **LOCATION OF FUTURE URBAN COMMUNITIES**

The selection of alternative locations for urban communities outside the greenbelt is influenced by the fact that from 2,000 to 2,400 hectares is required for each community of approximately 100,000 people, and by the desirability, in the absence of any clear advantages for other locations of proximity to the central water and sewer systems.

On this basis six locations appear as possible sites: Orleans in the east, Carlsbad Springs area in the southeast, the south part of Gloucester and the south part of Nepean to the south, Barrhaven in the south-west, and Kanata-Glencairn in the west.
[OPA #30, 16 MARCH, 1983, SECTION 2.2.2 IN PART]

An examination of each area was made in relation to:

Environmental Factors

i) The area of good agricultural land that would be pre-empted by development with the objective of minimizing the loss of agricultural land.

ii) The landscape attractiveneses of the area - attractive areas were considered more suitable for urbanization.

iii) The existence of mineral deposits or workings in the area - because of the potential value of mineral deposits and the present or potential nuisance of extractive operations, such areas were considered to have disadvantages for urban use.

iv) Water quality. Storm drainage adversely affects the quality of surface waters. Urban areas discharging directly to the Ottawa River are favoured as the Ottawa River has greater capacity to absorb pollutants in storm water.

v) The effect on conservation and recreation areas and river corridors.

vi) The degree of community disruption due to the required transportation system. If new transportation routes, made necessary because of the new urban community, could not be routed around existing communities, the area was considered less suitable for urbanization.

Development Implications

i) The cost of providing necessary transportation - minimum cost was an advantage.

ii) The cost of provision of sewer services - minimum cost was an advantage.

iii) The cost of provision of water supply - minimum cost was an advantage.

iv) Cost of development due to suitability of the land - depth of bedrock, incidence of slumping were considered.

Development Status

i) Whether the area is within an approved or proposed official plan, draft plan of subdivision, or whether the necessary basic infrastructure is contained in capital budget forecasts, are factors which make implementation easier and quicker. Considered positive points.

ii) Whether the land has been assembled by a public agency or a private company. Since implementation would be simplified this is considered positive also.

A tabulated summary of the analysis is included as Appendix A.

Council's assessment of the above indicates that the west, east and southwest, being the south part of Nepean and the south part of Gloucester are the locations best suited to urban development at this time. The southeast area above rates highly with regard to some of the above-noted criteria. It is concluded, however, that the population of the east should be limited by the adequacy of transportation services.
[OMB, ORDER NO. 2, 11 OCTOBER, 1979, SECTION 2.2.2 IN PART]

[OPA #30, 16 MARCH, 1983, SECTION 2.2.2. IN PART]

Council therefore proposes and designates on Schedules "A" and "B" the following areas for urban development in the planning area:

(1) All land within the inner limit of the greenbelt and the areas of Blackburn Hamlet and Bells Corners.

(2) An urban community of approximately 100,000 persons west of the greenbelt (Kanata-Glencairn).

(3) An urban community of approximately 75,000 persons east of the Greenbelt in the City of Gloucester and the Township of Cumberland (Orleans-Queenswood) subject to the following criteria:
[OPA #30, 16 MARCH, 1983, SECTION 2.2.2(3) IN PART]

i) that the uncommitted areas of land be kept in agricultural production for as long as possible prior to urban development, and

ii) that the development be phased to coincide with the timing of the provision of regional services such as trunk water mains and sewers and transportation facilities and any other matters of regional concern.

[OPA #17, 2 FEBRUARY, 1981, Section 2.2.2.(3) ALL]

(4) An urban community of 75,000 to 100,000 persons in the south part of Nepean including Barrhaven and the south part of Gloucester and not more than 35,000 in the south part of Gloucester subject to the following criteria:
[OPA #30, 16 MARCH, 1983, SECTION 2.2.2(4) IN PART]

i) that the uncommitted areas of land be kept in agricultural production for as long as possible prior to urban development, and

ii) that the development be phased to coincide with the timing of the provision of regional services such as trunk water mains and sewers and transportation facilities and any other matters of regional concern.

[OMB ORDER, NO. 57, 11 OCTOBER, 1979, SECTION 2.2.2(4) ALL]
OMB ORDER, NO. 30, 11 OCTOBER, 1979, SECTION 2.2.2(5) DELETED]

(5) Prior to development occurring within the area described in (4) which includes the river corridor but excludes Barrhaven, Council proposes that the following uses be permitted:

- farming (including the residential accomodation requirements of the farming activity);
- forestry;
- recreational uses that make use of and do not adversely affect the natural environment, nor prejudice the ultimate development of the area;
- uses that will assist in conserving or managing water supplies, wildlife or other natural characteristics.

Development permitted by the above within the river corridor shall be subject to the policies of Sections 5.4.6 and 5.4.7.
[OPA #20, 18 JULY, 1983 SECTION 2.2.2 (5) ALL]

2.2.3 STAGING OF URBAN COMMUNITIES

The objectives of staging in this plan are:

- to ensure the provision of all necessary services and facilities where growth is taking place,
- to encourage the development of employment centres at locations identified in this plan integrated in the newly developing communities,
- to encourage the use of public transit,
- to provide land for the various types of development contemplated by this plan, including the various types of residential development in appropriate amounts and locations at all times.

The cost of providing services within the urban area are such that it is not reasonable to contemplate the extension of services to all areas proposed for development simultaneously. Trunk water mains and sewers have to be built in advance of need at the cost determined by eventual, not immediate, capacity requirements. Roads can be progressively improved, and their construction is therefore more closely related to current capacity needs, although the protection of rights-of-way for future capacity needs imposes substantial capital outlays in advance of need. Transit, except that which operates on the road system, requires substantial capital investment in advance of realizing full potential capacity, and operating costs are affected by how quickly ridership develops. For these reasons there is merit in ordering urban development in compact, progressive fashion.

However, other considerations and objectives dictate otherwise. Providing choice of residential and industrial locations in particular, mitigates against channeling development as rigorously as might be desired to achieve maximum public economy.

Among the objectives of staging in this plan, that of providing suitable amounts of land for the housing of families is of first importance. The housing needs of families have traditionally been identified with the single-family detached dwelling. However, the actual need is represented by those housing types generally described as ground orientated or front door housing, and reflects the convenience, particularly for children of having direct access from the dwelling unit to the ground outside.

It is estimated that 58,000 ground orientated family housing units will be needed on land designated for development within the greenbelt and in west, south-west and east urban communities. At current rates of building, which are 3,000 to 3,500 ground orientated family units a year, this land would be sufficient for 16-20 years. However, because of recent shortages

which meant some demand may not have been met, and projected future household formation, which is expected to be high, as many as 5,000 ground-orientated family units per year may be required to meet the demands in 1975 and a number of succeeding years. Thus the areas designated for urban development may be sufficient for this housing purpose only until 1985. Accordingly, if further shortage of land for family housing is to be avoided, it will be necessary to commence development of a second stage of urban development in the early 1980's.

Council therefore intends that:

1) Subject to policies elsewhere in this plan, lands within the inner limit of the greenbelt, Bells Corners, Blackburn Hamlet, the West Urban Community (Kanata-Glencairn), the East Urban Community (Orleans-Queenswood), and the Barrhaven part of the South Urban Community shall be approved for urban development immediately.

[OPA #30, 16 MARCH, 1983, SECTION 2.2.3(1) IN PART]

2) Subject to policies elsewhere in this plan lands in the south part of Gloucester and the south part of Nepean in the South Urban Community shall be phased to coincide with the timing of the provision of regional services such as trunk water mains and sewers and transportation facilities and a other matters of regional concern.

[OMB ORDER, NO. 58, 11 OCTOBER, 1979, SECTION 2.2.3(2) ALL]

[OPA #30, 16 MARCH, 1983, SECTION 2.2.3(2) IN PART]

3) In order to achieve the establishment of a satisfactory balance between residential development and the development of employment opportunities in urban communities beyond the Greenbelt, Council considers it necessary to take aggressive measures which may include among other things the following: i) provision of services; ii) signing of agreements with developers; and iii) purchase and development of land by area or regional municipalities.

2..2 HOUSING

2.3.1 GOALS FOR THE REGION

The goals identified in Part 1 which relate to housing are:

- to provide for adequate housing of all types accessible to all segments of the population.
- To maximize range of choice of types of living and working environments and facilities in order to permit maximum variety of life styles.
- To minimize disruption to established communities.

These statements are purposely generalized and represent long term goals of Council. In order to formulate a housing policy it is necessary to state objectives more specifically. For example, 'adequate' housing' may mean 'adequate' numbers or 'adequate' quality. Accessible to all segments of the population may mean 'accessible' in terms of location or 'accessible' in terms of price. The major objectives of Council with regard to housing are presented below.

However, the policies and programs contained in this plan must be general and capable of further elaboration unless constant amendment to this plan is to occur. Accordingly, only the major objectives for housing are presented below.

2.3.2 OBJECTIVES OF THE REGION

There are four major objectives with regard to housing with which this plan is concerned.

i) That sufficient number of dwelling units be provided.

It is estimated that at the plan threshold population of one million, a total of 360,000 dwelling units will be required.

Table 2-3
Estimated Housing Requirements Related to Increase in Population

	1971	Threshold	Increase (Decrease)
Population	471,931	1,000,000	528,069
Persons/ dwelling	3.4	2.8	(0.6)
Dwelling	137,230	360,000	222,770[a]

[a] An additional 15,000 units will have to be built if demolitions continue at the present rate.

The rate of increase in the number of dwelling units is greater than the rate of increase in population because average household size in expected to decline. This is mainly attributed to three factors:

- more families will wish and be able to afford to live in separate dwelling units - technically known as undoubling,
- more young adults will want self-contained accommodation,
- as average age increases there will be more older people living in separate dwelling units.

The combined effect of these influences will be to create a demand for more than 220,000 new dwelling units exclusive of demolitions.

ii) That a variety of housing types be provided

Different types of dwelling units - single-familly houses, row or court houses, apartment blocks, or apartments in converted dwellings - provide types of shelter that meet needs of different individuals and families - their life styles, their age, the size of their families. As a general rule, families with children should live in dwelling units specifically designed for children. Obviously there must be latitude in assumptions of housing demand by type. For example, it cannot be assumed that as children leave the family the parents' housing preferences change. However, it is possible and important for this plan to establish a desirable housing mix to meet expected needs and to be used as a guideline for development approvals. As previously mentioned, housing for families with children should be ground orientated. For the purposes of this plan it is considered that provision should be made for a number of units in ground orientated housing equal to the expected number of families of three or more persons, although in practice the occupancy of these dwelling units will include some 2 person families and single person households. The estimated requirements for ground orientated and other housing types is shown in Table 2-4.

Table 2-4

Estimated Housing Requirements Ground Orientated/Non-Ground Orientated Units

	Total	Ground Orientated	Non-Ground Orientated
Units needed	360,000	196,000	164,000
1971 stock remaining[a]	122,000	88,000	34,000
To be built	238,000	108,000	130,000

[a] Assuming demolition of 15,000 units.

It is assumed that 50,000 mainly non-ground orientated units will be built by redevelopment in the central area, in district centres as a result of the stimulus of the introduction of rapid transit, and to a lesser extent elsewhere. It is therefore estimated that 80,000 non-ground orientated housing units should locate on vacant land.

It is expected that approximately 13,000 ground orientated family housing units will be built in rural parts of the planning area. Thus 95,000 ground orientated units will be required on vacant land in the urban areas. This figure for ground orientated units required on vacant land in the urban areas amounts to 55% of all new units, and should be considered a minimum provision as occupancy of these units will not be limited to families with children.

In order that a variety of housing tyeps are built within the ground orientated family type, Council believes a minimum number of detached and semi-detached units should be provided. The Home Builders' Association of Metro Ottawa has suggested that 50% of ground orientated dwellings should be of this type. Council considers this to be an acceptable minimum. However, in establishing these guidelines, Council does not intend that these figures should be varied according to particular needs that may arise for housing in the period of this plan nor that they should defeat any particular planning objective if overall housing needs are being satisfactorily met.

Through the proposals for staging development, land will be made available to assure that an adequate number of areas are available for housing development at any one time to afford a suitable choice of locations. However, to give choice in location for each type of housing as well as for housing as a whole, it is necessary to insure that the density of residential development in the various sections of the urban portion of the planning area reflects the housing needs that have already been identified.

iii) That housing be provided in a variety of locations.

The policies of this plan attempt to balance the objective of developing a limited number of areas comprehensively and quickly with the objective of providing choice in residential location and housing availability.

Accordingly, development of many areas will be encouraged at any one time. This should include for development:

[OMB ORDER, NO. 33, 11 OCTOBER, 1979,

SECTION 2.3.2 (iii) IN PART]

- All parcels of vacant land designated residential district within the inner limit of the greenbelt. In 1971 these totalled approximately 2,350 hectares.

- 3,340 hectares of vacant land designated residential district in the West and East Urban Communities and the Barrhaven area of the South Urban Community provided that development of only those parcels of land in these areas shall be encouraged that represent, in the opinion of the Regional Council, a conformity or compatability with its servicing policies, corresponding staging policies of the appropriate local area municipality, and other development policies of this plan.

  [OMB ORDER, No. 59, 11 OCTOBER, 1979, SECTION 2.3.2 (iii) IN PART]

  [OPA #30, 16 MARCH, 1983, SECTION 2.3.2 (iii) IN PART]

Approximately 1,100 hectares of land should be provided for housing in the Nepean and Gloucester parts of the South Urban Community (excluding Barrhaven) which shall be phased to coincide with the provision of regional services.

[OMB ORDER, NO. 60, 11 OCTOBER, 1979, SECTION 2.3.2 (iii) IN PART]

[OPA #30, 16 MARCH, 1983, SECTION 2.3.2 (iii) IN PART]

(iv) That housing be provided at a price people can afford

Traditionally the freemarket has determined the price of housing. There are indications that the price of housing has risen to the extent that a large number of people cannot easily afford housing to suit their needs. All levels of government have recognized the problem and the federal and provincial governments have created programs and provided finance to ameliorate the situation. It is Council's intention to take whatever action is possible to ensure adequate housing is provided for the inhabitants of the planning area at a price they can afford by the development of an overall housing policy. Without limiting the ultimate range of policies which may be developed at some future time, it is Council's intent that this should take three main thrusts.

[OPA #30, 16 MARCH, 1983, SECTION 2.3.2(iv) IN PART]

- To restore the effectiveness of the market to the fullest extent practicable.

- To take whatever action is possible to ensure sufficient housing for assisted purchase is provided to meet the needs of persons whose incomes are inadequate to obtain suitable housing in the private market.

- To encourage the provision of subsidized housing.

[OMB ORDER NO. 31, 11 OCTOBER, 1979, SECTION 2.3.2 (iv), IN PART]

[OMB ORDER, NO. 3, 11 OCTOBER, 1979, SECTION 2.3.2(iv), IN PART]

Mobile Home Parks

With mobile homes* gaining rapidly in popularity, there is an increasing interest in the planning area in the establishment of mobile home parks** providing permanent housing accommodation. The vehicular concept of the mobile home has changed to the extent that units are now permanently located as relatively inexpensive single family homes comprising large-scale development projects. The mobile home has evolved from essentially a recreational vehicle to a form of systems-building representing a manufactured unit. When appropriately located in a fully serviced area, the mobile home provides a satisfactory form of permanent housing.

*Mobile Home - Definition C.M.H.C. defines a mobile home as "a transportable, factory built, single family dwelling, providing standards equal to those laid down in the Canadian Code for Residential Construction (Residential Standards 1970) designed to be transported on its own wheels and chassis to the mobile home lot, and may be supported on wheels, jacks, posts, or piers, or with a permanent foundation. It is designed to be connected to service facilies so as to be suitable for year round long-term occupancy." For the purposes of this section, factory-build houses, manufactured houses, modular housing, sectional housing, or any other term referring to transportable single family dwelling units will be deemed to be interchangeable with "mobile homes" as defined above.

**Mobile Home Park - Definition - A mobile home development under single ownership and managed by a mobile home park operator but not having a registered subdivision plan of lots. Sites or sites with individuals mobile homes may be rented. Ownership and responsibility for the maintenance of internal roads, underground services, communal areas and buildings, together with general park management rest with the management.

In recognition of this, mobile homes can now be underwritten by the federal government under the National Housing Act.
[OPA #30, 16 MARCH, 1983, SECTION 2.3.2(iv) IN PART]

Council's opinion is that mobile homes are potentially a significant component of the planning area's housing stock. Council also feels that because of the higher housing densities normally associated with mobile home parks, these developments should be carefully sited within or adjacent to residential communities. There is a need to provide mobile home park residents with complete community facilities and, hence, proximity to shops, schools, and public transit is a key determinant in locating mobile home parks. At the same time, Council recognizes that the desire of many residents to maintain the character of established neighbourhoods or communities must also be respected in considering locations for mobile home parks.

Council intends that the location of individual mobile home units on separate lots throughout the planning area be dealt with by each area municipality in accordance with policies expressed elsewhere in this plan.

2.3.3 **SUMMARY**

In summary with respect to housing:

(1) When approving or considering restricted area by-laws, plans of subdivision, plans of condominium and local official plans, or amendments to one or more of them, Council shall ensure in furtherance of the goals and objectives for the region as a whole:
[OPA #30, 16 MARCH, 1983, SECTION 2.3.3(1) IN PART]

i) total housing provision is in accordance with Table 2-3

ii) housing mix is in accordance with Table 2-4,

iii) the total number of dwelling units located within the area bounded by the Ottawa River and the outer limit of the greenbelt shall not exceed 235,000 of which not more than 170,000 shall be located in the City of Ottawa, 12,000 in the City of Vanier, 1,000 in the Village of Rockcliffe Park, and 29,000 and 23,000 in the portions of the City of Nepean and the City of Gloucester respectively that lie within the area defined above.
[OMB ORDER, NO. 34, 11 OCTOBER, 1979, SECTION 2.3.3(1) IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 2.3.3(1) IN PART]

(2) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, affecting lands that were vacant as of December 31, 1974, in residential districts in Areas A, L, M, T, and U (as shown on Map 3) and in urban communities outside the greenbelt

designated on Schedule B, Council shall implement the policy hereinbefore enunciated respecting housing mix in such a way as to assure that a mix of houisng within area municipalities or communities, which the Region in its discretion deems appropriate, shall result, it being the intent that variances from the strict compliance with the numerical guidelines set out may be permitted by the Region without amendment to this plan, where it can be shown that circumstances so warrant.
[OPA #30, 16 MARCH, 1983, SECTION 2.3.3 (2) IN PART]

Among others, such circumstances or proposals involving demonstration projects, adaptability of certain sites for specific housing types, projects having lesser impact on the overall goals and objectives of the plan, and finally to a lesser extent and in conjunction with other considerations, the influence that the market might have at any given time, shall be considered for possible exemption from the strict application of the above policies.
[OMB, ORDER NO. 35, 11 OCTOBER, 1979, SECTION 2.3.2(2) IN PART]

(3) [OMB ORDER NO. 36, 11 OCTOBER, 1979, SECTION 2.3.3(3) DELETED]

(4) Council will monitor all housing development on an ongoing basis and will review its role in the fulfilment of anticipated housing needs with the object of restoring the effectiveness of the market to the fullest extent possible and also to determine need for appropriate amendments from time to time to the policies enunciated in this plan.
[OMB ORDER NO. 37, 11 OCTOBER, 1979, SECTION 2.3.3(4) IN PART]

(5) Council intends to urge the development, in cooperation with other levels of government, of assisted home ownership programs in the planning area.
[OMB ORDER NO. 32, 11 OCTOBER, 1979, SECTION 2.3.3(5) IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 2.3.3(5) IN PART]

(6) Council will petition the Minister of Municipal Affairs and Housing to empower a Regional Housing Authority or Department to be responsible for the provision of subsidized housing programs in the planning area.
[OPA #30, 16 MARCH, 1983, SECTION 2.3.3(6) IN PART]

(7) With regard to subsidized housing, Council shall:

i) encourage the dispersal of relatively small projects and individual units in appropriate locations, integrated with existing and new communities and the development of a wider cross-section of tenant population so as to reduce social and economic stratification.

ii) urge the provision of a high quality living environment within each project with adequate social and recreational facilities conveniently located close to employment, shopping, transportation, and schools.

(8) Council will establish long range qualitative and quantitative subsidized housing goals conforming with a general municipal housing policy that is integrated into overall planning and development objectives.

(9) To assist in the proper and orderly development of mobile home parks in the planning area, Council:

i) will request the provincial government to prepare appropriate amendments to the relevant statutes necessary to establish the same controls with respect to mobile home parks as are now in effect and relate to subdivision of land.
[OPA #30, 16 MARCH, 1983, SECTION 2.3.3(9) IN PART]

ii) will assist area municipalities in the identification of sites for mobile home parks and will require appropriate local restricted area and licencing by-laws be enacted to regulate mobile home park developments.

iii) will in furthering the policy set out in (ii) require that mobile home parks be located either:

a) on lands designated residential district on Schedule B or village on Schedule A where community sewer and water services are available or are planned to be installed as part of Council's five year capital works program, or

b) on lands designated village on Schedule A not served by municipal piped water and sewage services, subject to the approval of sewage disposal and water supply systems by the authority having jurisdiction over such systems. The total number of units and the density will conform to this plan.
[OMB ORDER, NO. 4, 11 OCTOBER, 1979, SECTION 2.3.3 (9) (iii) (b), IN PART]

(10) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, in which mobile home parks are proposed or permitted, Council shall ensure:
[OPA #30, 16 MARCH, 1983, SECTION 2.3.3(10) IN PART]

i) the adequacy of transportation services,

ii) the adequacy of water supply and waste disposal facilities,

iii) the adequacy of community facilities discussed in Part 4 of this plan.

2.4 RESIDENTIAL COMMUNITIES

Housing should be provided for all inhabitants of the planning area. It should be located in a good residential environment. The creation of a good residential environment should have as its objective that:

- people can more easily fulfill their aspirations and goals in a satisfactory residential environment, while social problems, squalor and crime have been correlated with poor environments.

- an attractive, stable residential area will encourage homeowners to maintain their property and dwelling units will last longer. More than half the low density housing required in the period contemplated in this plan is in communities that now exist and its continual maintenance will assist in meeting housing needs.

- the sub-goals of providing parks, schools and community facilities and of optimizing safety and convenience can be better realized.

- the retention of established character and of different architectural styles provide a historic continuity which should not be destroyed.

- varied housing types and costs within both existing and new residential areas provide opportunity for interaction between different income, social and ethnic groups.

2.4.1 URBAN RESIDENTIAL COMMUNITIES

Council intends that both existing residential districts and residential districts yet to be built should be developed into communities with a mixture of housing types and adequate recreational and social services.

(i) Existing Residential Districts

The maintenance of existing communities and the enhancement of their environment is of prime importance because it appears that more than half of all low density (detached and semi-detached) housing required by the end of the period envisaged by this plan is already constructed in communities that now exist. These communities are a resource of good housing which need not be depleted. They have an established character which is pleasing and adds variety to the urban area. In addition, their different architectural styles provide a historic continuity which should not be destroyed. The varied housing types and costs in

existing residential districts in many cases provide the opportunity for interaction between different income, social, and ethnic groups. There is a substantial body of opinion that these values should not be diminished.

The maintenance of existing communities implies their improvement, not a state of no change. The new urban communities outside the greenbelt will reduce pressure for development in existing communities and the direction of new job opportunities into these areas will lessen the impact of increasing traffic on existing communities. But positive action should be taken to improve existing communities on a continuing basis.

This action is appropriately an area municipal concern and includes:

- the preparation and approval of neighbourhood plans in accordance with this plan;

- the passing and enforcement of maintenance and occupancy by-laws under the Planning Act;
  [OPA #30, 16 MARCH, 1983, SECTION 2.4.1(i) IN PART]

- the continued improvement of services and facilities that municipal councils and local boards are responsible for;

- participation in those programs of the senior levels of government geared to improving the conditions of the existing housing stock.
  [OMB ORDER, NO. 5, 11 OCTOBER, 1979, SECTION 2.4.1(i) IN PART]

Redevelopment may contribute to improvement of residential districts and also add support to establishing and operating a rapid transit system. In addition it can provide accommodation for people who wish to locate close to major activity centres, e.g. the Central Area, universities, or parks, and encourage the relocation of existing uses which may be incompatible with the generally residential nature of surrounding areas, e.g. industrial uses. Because of their importance both to concerns of the regional municipality and of the area municipalities, policies dealing with the redevelopment of land need to be devised jointly and adopted at both municipal levels.

(ii) New Residential Districts

New residential districts are important to Council because if population growth continues, a substantial proportion of the people living in the planning area will live there. Furthermore, the location, size, and density of new residential districts will affect existing residential districts as new transportation routes are built to serve the new areas and funds are allocated to provide community and

social facilities in them.

Council has several concerns with regard to the development of new residential districts. These are:

- the adequate provision of necessary services and facilities to serve the inhabitants;
- that the housing mix provisions in Section 2.3.2 and policies (1) and (2) of Section 2.3.3 of this plan are implemented;
- any phasing of the development within the new residential district should be such as to encourage the development of contiguous areas, so that if development does not occur to the extent anticipated, large areas are not left vacant within a residential district to which services and facilities have been provided.
- the development of energy efficient patterns of land use including provision for efficient and attractive transit service in proximity to dwelling units and commercial, industrial and institutional uses, provision for pedestrian and bicycle travel, and subdivision design which optimizes solar access and minimizes travel needs.
  [OPA #34, 9 MAY, 1983 SECTION 2.4.1(ii) IN PART]

  In addition to the residential districts designated in this plan the Provincial Cabinet supports the development of an energy conserving community in the City of Kanata on the grounds of "the provincial significance of proceeding with an energy saving project of this nature as a matter of urgency and the experience gained from this project could be emulated elsewhere and result in substantial improvements in energy savings to other housing projects".
  [OMB ORDER, NO. 62, 11 OCTOBER, 1979, SECTION 2.4.1(ii) IN PART]

  [OPA #27, 28 JULY, 1982, SECTION 2.4.1(11) IN PART]

  [DELETED BY OPA #34, 9 MAY, 1983 SECTION 2.4.1(ii) IN PART]

In summary, with respect to urban residential communities:

(1) Areas designated residential district on Schedule B shall be used primarily for residential purposes and other uses designed to serve the needs of residential districts provided that this policy shall not preclude the establishment of non-residential uses to act as buffers between major roadways and residential communities.

(2) Council will prepare, jointly with area municipalities, a policy for redevelopment of land which will include consideration of the effects

of such policy on transit routes.

(3) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, Council shall ensure:
[OPA #30, 16 MARCH, 1983, SECTION 2.4.1(3) IN PART]

i) the adequacy of transportation services;

ii) the adequacy of piped services and treatment facilities; and

iii) the adequacy of community facilities discussed in Part 4 of this plan.

(4) The provision of commercial facilities shall be in accordance with Section 2.5.4.4.3. of this plan.

(5) The lands designated as "Energy Conserving Residential District" will be used for the purpose of an energy conserving community, the population of which shall not exceed 2,200 dwelling units (8,000 persons) and shall be accommodated within the 100,000 population allocated for the West Urban Community. The area shall only be developed after the approval of a detailed secondary plan acceptable to both the City of Kanata and the Regional Municipality of Ottawa-Carleton. This plan shall establish the criteria as to how an energy conserving commuity is to be developed and should consider inter alia the following:
[OPA #30, 16 MARCH, 1983, SECTION 2.4.1(5) IN PART]

i) hot water district heating to all housing units;

ii) specified responsibility for the continuing ownership, management, and operation of the district heating system and monitoring of the same;

iii) establishment of structures and rate review acceptable to the Ministry of Energy;

iv) assurances that no financial costs will be incurred by the City of Kanata as a result of the development of district heating facilities; and

v) the secondary plan shall make provision for siting, insulation, landscaping, innovative architectural design, and other considerations necessary to maximize energy conservation.
[OMB ORDER, NO. 63, 11 OCTOBER, 1979, SECTION 2.4.1(ii) (5) ALL]
[OPA #30, 16 MARCH, 1983, SECTION 2.4.1(5) (v) IN PART]

(6) When approving or considering local official plans, secondary plans, development plans, plans of subdivision, plans of condominium and severances or amendments to one or more of them, Council shall ensure that the proposed plan encourages energy savings by providing good opportunity for developing south facing buildings and minimizing auto travel needs by provision of safe and convenient pedestrian and bicycle routes.
[OPA #34, 9 MAY, 1983 SECTION 2.4.1(ii) (6) ALL]

(7) [DELETED BY OPA #34, 9 MAY 1983 SECTION 2.4.1(ii) (7) ALL]

2.4.2 RESIDENTIAL DEVELOPMENT IN RURAL AREAS

2.4.2.1 Introduction

In 1971 there were 49,000 people or about 10% of the regional population living in the rural portions of the planning area. Roughly 15,000 or 30% of these resided in the 40 hamlets and villages in the planning area. These communities ranged from a cluster of houses centered on a crossroads to villages of several thousand persons with a variety of commercial establishments and community facilities.

The remaining 70% of the rural population (34,000 persons) was located throughout the countryside in a number of distinct patterns. Most evenly distributed was the farm population which numbered just under 9,000. Of the non-farm housing some was randomly located on large lots but most was clustered on small lots (less than 0.4 hectares) either in the form of strip development along major roads and watercourses or in isolated subdivisions*. Some of the small lot development was in the form of cottages converted to year-round dwellings.

As set out in Section 2.2.1 the regional framework for growth provides for population growth in the rural area to be at the same rate as growth of the total population. This would entail approximate increases in population as set out in Table 2-5.

Table 2-5
Rural Population Growth

Regional Population [a]	Rural Population	Increase Over 1971	Increase in Each Stage	Year [a]	Stage
471,931	49,000	–	–	1971	
750,000	75,000	26,000	26,000	1991	1
1,000,000	100,000	51,000	25,000	2006	2

[a] See Table 2-1 in Section 2.1.1.

*Examples of small lot subdivisions are Marathon in West Carleton; Heart's Desire in Nepean.

The remainder of this section deals with the staging and distribution of the rural growth component of Table 2-5.

2.4.2.2 **Objectives**

Policies for planned residential development in the rural area have been determined by the following objectives derived from the goals set out in Part 1 of this plan:

- Provide for the residential accommodation requirements of the rural economy

  In order that the rural economy can readily adjust to changing social and economic conditions, policies concerning the housing component of the rural economy must have flexibility to accommodate these changes. Because such flexibility often provides loopholes through which non-farm housing is established there is a tendency to pursue policies which restrict non-farm development to the point of unduly restricting legitimate rural housing. Regional policies should retain the desirable flexibility.

- Provide for a variety of rural life styles

  Consistent with policies expressed elsewhere in this plan, regional rural residential policies should provide for a variety of rural life styles. It is particularly important that rural housing continue to be within the financial means of a broad segment of the regional population.

- Leave broadest possible scope for local planning

  Regional policies should be detailed only to the extent necessary to achieve defined regional objectives. In this way the area municipalities can define and achieve a range of local planning objectives.

- Preserve and enhance the beauty and heritage of the rural area

  Permanent settlement of the planning area took place during the first half of the nineteenth century and much evidence of the early society can still be found today, particularly in the rural portions of the planning area. Since the planning area is part of the National Capital Region the preservation of this heritage is of more than local concern. Even very limited residential developments can make a large impact in the rural area. Special care must be taken to ensure that all rural residential development respects our heritage and leaves intact the natural beauty found here.

- Make the maximum use of existing facilities

  There is at present a considerable investment in facilities serving the rural population. Most of these facilities are located in the

villages and include business and employment establishments, recreation facilities, libraries, schools, churches, social institutions, municipal offices, post offices, fire halls, streets, and street lighting. It is preferable to gradually expand and adapt these existing facilities, thus using the existing villages as focal points for the gradually expanding rural population (and, subject to policies elsewhere in this plan, that these lands be approved for development immediately) rather than to provide new facilities in new locations* or in only a few rapidly expanding existing centres.

- Accommodate growth with the minimum social disruption

  It is considered desirable that the existing villages in the region expand gradually in order to make it easier for their present inhabitants, businesses, institutions, and facilities to adapt to the changing conditions.

- Minimize the financial burden associated with residential growth

  The rate, type, and distribution of residential growth determine the extent of the accompanying financial burden. Regional policies should attempt to minimize regional and school board expenditures while at the same time leaving the area municipalities with enough flexibility to meet their individual financial requirements.

- Avoid unnecessary waste of non-renewable resources and respect the natural environment

  Development should avoid areas of good farm land, mineral potential, high recreation or conservation potential, a hazardous nature, or particularly high scenic value. Care should be exercised to assure that development has minimum adverse physical and visual impact and in particular that natural features be disturbed as little as possible and groundwater pollution be averted.

- Assure compatibility between land uses

  Care should be taken when locating rural residential development to assure its long term compatibility with the surrounding land uses and to recognize the priority of traditional rural activities. The two factors most likely to cause land use conflicts are odours associated with farming activities (particularly intensive operations) and noise, vibration, and dust associated with mineral extraction operations. Other important but more localized factors include airport noise zones, rural industries and railways.

*Munster, one of the largest regional villages, was developed in a very short period of time with central underground services but without any community facilities. It is considered that this approach to development causes considerable inconvenience to the new residents and unnecessary pressures on municipal and school authorities.

. Protect the public health and safety

Development should be located and designed so as to avoid hazard lands as described in Section 5.6.2 and to assure the long term adequacy of the water supply and waste water treatment system.

2.4.2.3 **Rural Development Patterns**

The existing rural residential development pattern is discussed in Section 2.4.2.1 Council considers that regional objectives in Section 2.4.2.2 will be best met if future rural housing is of five types: farm and other housing related to the rural economy, large country lots, village development, limited infilling in hamlets and in locations specified in accordance with Section 2.4.2.9.
[OPA #3, MARCH 1, 1979 SECTION 2.4.2.3 IN PART]

[OPA #20, 18 JULY, 1983, SECTION 2.4.2.3 IN PART]

Strip development and isolated small lot subdivisions are considered to be an undesirable form of rural development because of their physical and visual impact on the rural environment and because this form of development leads to demands for urban services and facilities. Those desiring small-lot rural living are best accommodated by expansion of existing villages.

Within the rural part of the planning area proposals may be received during the planning period for recreational or leisure-oriented development involving permanent housing. However, it is expected that most of the traditional cottage or second-home development will occur beyond the regional boundary during the planning period because of the marginal nature of the sites still available for this type of development within the planning area. In any case, in view of the many cottages which have been converted to permanent dwellings in recent years, any projects which are initially proposed as second-home developments must be expected to undergo similar conversion. Even those cottages which have not been converted are being used with increasing intensity the year round. Thus Council will consider all leisure-oriented housing proposals to involve permenent housing. The plan treats this housing type as a variety of country lot development and policies are included in Section 2.4.2.7.

2.4.2.4 **Distribution**

Council considers an equal split between village and large country lot development to be the optimum distribution for rural housing growth during the planning period. This distribution will encourage use of the existing village facilities, provide maximum choice in the rural housing market and, through spreading rather than concentrating the development impact, is not expected to lead to the undesirable conditions often associated with urban sprawl. Since the number of new housing units constructed as infilling in existing hamlets is expected to be relatively small, area municipalities may consider these units to be part of either their country lot or their village population allocations.

[OPA #3, MARCH 1, 1979, SECTION 2.4.2.4 IN PART]

In arriving at policies for the allocation of the rural population growth shown in Table 2-5, Council will therefore take into account the size of the rural area and the number of villages within each area municipality in relation to all of the rural area* and villages** within the planning area. In the Township of Goulbourn, village population growth in accordance with Tables 2-5 and 2-6 shall be based on the three villages of Ashton, Munster and Richmond. The village population allocation for Stittsville shall be 10,000 persons as provided for in Goulbourn Official Plan Amendment 27. The amount and staging of country lot development which Council intends for each municipality containing rural areas is set out in Table 2-6. [OPA #49, SEPT 10, 1985, SECTION 2.4.2.4 IN PART]

It is on the above basis that Council intends each area municipality containing rural areas to prepare a local official plan containing policies for the distribution of rural residential growth. In order to meet local planning objectives some municipalities may wish to vary the village/country lot proportion implied by the above. Council will consider local official plans which vary this proportion and, as long as the total population remains unchanged for that area municipality, Council may approve such plans without amendment to this plan.

Local official plans for any area municipality may provide for less country lot development than that shown in Table 2-6 without amendment to this plan. However, any re-allocation of the resulting "surplus" population to another area municipality (or municipalities) will be subject to amendment to Table 2-6.

Table 2-6

Country Lot Development — Distribution[a] and Staging[b]

Municipality	Population Increase on Country Lots[c]		
	Stage[b] 1	Stage[b] 2	Total for[d] Planning Period
West Carleton	3,200	3,200	6,400
March	650	650	1,300
Goulbourn	1,400	1,400	2,800
Nepean	900	900	1,800
Rideau	2,150	2,150	4,300
Osgoode	1,900	1,900	3,800
Gloucester	900	900	1,800
Cumberland	1,650	1,650	3,300
Totals[e]	12,750	12,750	25,500

[a] Based on rural acreage, i.e., lands beyond outer limit of NCC greenbelt minus the new urban communities designatd on Schedule A.

[b] See Table 2-5.

[c] As defined in Section 2.4.2.7.1.

[d] For the purpose of implementing Table 2-6 the 'Planning Period' will be interpreted as commencing as of the date of the adoption of this plan by Regional Council. (OMB ORDER, NO. 6, 11 OCTOBER, 1979, SECTION 2.4.2.4. IN PART)

[e] Population growth resulting from agricultural severances shall not be considered as country lot growth for the purpose of Table 2-6. (OMB ORDER, NO. 7 11 OCTOBER, 1979, SECTION 2.4.2.4., IN PART)

*Rural area includes all lands beyond outer limit of NCC greenbelt minus the new urban communities shown on Schedule A.

**As shown on Schedule A.

2.4.2.5 Staging

Council considers it desirable that the rural residential expansion be staged in order that a steady rural housing supply of different types will be available throughout the planning period. Since Council intends that the pace of rural residential growth be the same as that of the region, the staging for rural expansion in Tables 2-5 and 2-6 is tied to two regional population thresholds.* Council intends that a staging policy, based upon the population thresholds in Tables 2-5 and 2-6, be incorporated in each local official plan.**
[MINISTERIAL MODIFICATION NO. 2, AUG 20, 1976, SECTION 2.4.2.5 IN PART]

The above staging policies for rural residential development will be reviewed three years after the adoption of the plan by Council.

2.4.2.6 **Villages**

2.4.2.6.1 Villages Designated for Expansion

As mentioned in Section 2.4.2.1 there are approximately 40 hamlets and villages in the planning area having a total population in 1971 of roughly 15,000 persons.

Section 2.4.2.4 and Table 2-5 provide for the population in villages to expand by up to 25,500 persons during the planning period. This village expansion is intended to provide housing for rural families and retired farmers who wish to remain in the area where they have roots as well as for others who desire an opportunity to live in a community of a size and character clearly different from an urban or suburban neighbourhood.

Council intends that the 29 villages designated on Schedule A shall be the locations for future village expansion within the planning area. These villages have been identified on the basis of a growth potential analysis which examined a number of factors in relation to all the residential clusters within the rural area. These factors included:
[OMB ORDER, NO. 8, 11 OCTOBER, 1979, SECTION 2.4.2.6.1, IN PART]

- physical characteristics, including population size, existing development pattern, commercial and community facilities, and location in relation to the primary road system,

- the opinions of the local councils and rural residents (expressed at public hearings and in written submissions).

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*Table 2-5 indicates the years at which these population thresholds are expected to be reached; however, it is Council's intention that the population thresholds rather than planning periods of specified duration be used for staging purposes.

**More detailed staging may be desirable but is left to the discretion of the area municipalities.

2.4.2.6.2 **Regional Objectives for Villages**

The following are the regional objectives* which relate to the expansion of the villages designated on Schedule A; the requirements for local official plans set out in Section 2.4.2.6.3 are based on these objectives:

- the scale and rate of growth should be in accordance with Table 2-5 and Sections 2.4.2.4 and 2.4.2.5, and within the ability of the region and the area municipalities to provide the required community facilities,
- growth should be located in or adjacent to existing rural communities already containing a range of services and facilities,
- the growth should be accommodated in a manner which respects the heritage of the existing communities,
- the direction(s) and extent of growth for each village should be carefully chosen in order to both preserve non-renewable resources and respect the natural environment to the greatest possible extent and to minimize exposure of the new residents to adverse environmental influences,
- the size of any village community should be limited by its potential to expand on the basis of private individual services**,
- expansion of village communities on the basis of communal water and sanitary sewer systems should only be considered for those villages where such services are already required for the public health and safety.

[OPA #30, 16 MARCH, 1983 SECTION 2.4.2.6.2 IN PART]

2.4.2.6.3 **Local Official Plans**

Council intends that expansion of the 29 designated villages shall be on the basis of local official plans prepared by the area municipalities and approved by the Region. The preparation of these plans will provide an opportunity for the local residents to become involved in planning the future of their communities. Each such local official plan shall include:
[OMB ORDER, NO. 9, 11 OCTOBER, 1979, SECTION 2.4.6.3 IN PART]

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*Based on Section 2.4.2.2

**In 1974 this implied a development pattern of rather large lots since the only private sewage disposal system acceptable to the Ontario Ministry of the Environment was the septic tank. Standards for lot sizes increased during the late 1960's and early 1970's from 1,400 square metres to 0.2 hectares (2,000 square metres) and in some situations to 0.4 hectares. It is hoped that technological advancements in private sewage disposal systems will permit development on small lots more in keeping with the character of the existing villages.

- policies for the amount and staging of expansion (if any), in accordance with Table 2-5 and Sections 2.4.2.4 and 2.4.2.5, of each village designated on Schedule A within the area municipality,

- a plan showing the proposed location of the growth,

- a plan of the proposed land uses and major streets,

- professional evidence based on field investigations that the amount of growth in the locations proposed can be accommodated on individual private services acceptable to the Ontario Ministry of the Environment,

- evidence that the regional concerns outlined in Section 2.4.2.6.2 above have been taken into account during the preparation of the plan.

Since it is Council's intention that village expansion shall be on the basis of individual private services, village expansion on the basis of communal water and sanitary sewerage systems shall only be considered where communal services must be installed for the sake of the health and safety of the existing (1974) population.*

In the Township of Goulbourn, where the approved level of growth in the village of Stittsville has exceeded the limits established for rural villages, growth in all of the villages shall be based on the policies of 2.4.2.4 and approved local official plans. Amendments to the Goulbourn Official Plan which would have the effect of expanding the boundaries of the developed area in village plans will not be approved unless the policies of this plan are amended.
[OPA #49, 10 SEPT, 1985 SECTION 2.4.2.6.3 IN PART]

It is Council's opinion that under no circumstances should a village expand through the 1,000 population threshold; nor should there be further expansion of any village having a 1974 population above 1,000,** in the absence of information on how much additional growth can be safely accommodated on private individual services.

In addition to those villages already requiring the installation of communal services, Council is aware that expansion of certain villages designated on Schedule A will be limited or influenced by local constraints. By way of example, expansion of Sarsfield on the basis of private individual services is expected to be severely limited; plans for both South Gloucester and Greely will require special care because of the proximity of sand, gravel, and limestone deposits as well as active pits and quarries; expansion in the village of North Gower must respect the flood plain on Stevens Creek; a plan for Notre-

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*Richmond, Stittsville, Manotick and possibly others.

**With the exception of any villages for which the Region, because of the size of their 1974 populations (see footnote*), provides communal services with capacity for some expansion.

Dame-Des-Champs in accordance with regional population and servicing policies will be particularly difficult to prepare since this village designation is based on a social community which focuses on a number of community facilities but which is physically dispersed. It is Council's intention that each area municipality take local constraints into consideration when preparing local official plans.
[OPA #30, 16 MARCH, 1983, SECTION 2.4.2.6.3 IN PART]

2.4.2.7 Country Lots

2.4.2.7.1 Introduction

For the purposes of this plan, the term country lot development is intended to mean all rural, single-family housing, other than that directly associated with either farming or a village community, at net densities ranging from about one unit per 0.8 hectares to one unit per ten hectares, although under certain conditions densities may fall outside of this range. This type of development has in the past been discouraged in Ontario except where provided for in an approved official plan. Much development of this kind existing within the region has been established without planning approval, either as a result of loopholes in The Planning Act or through severances by Committees of Adjustment. As indicated in Section 2.4.2.3, however, Council considers this type of development when properly planned to accord with regional objectives.
[MINISTERIAL MODIFICATION, NO. 3, AUG 30, 1976, SECTION 2.4.2.7.1 IN PART]

2.4.2.7.2 Regional Objectives for Country Lot Development

The broad regional objectives related to country lot development are:

- the amount, distribution and staging should be consistent with the provisions of Sections 2.4.2.4 and 2.4.2.5 and Table 2-6,
- it should not be located in areas which, because of their natural characteristics, represent important regional resources described in Sections 5.1 to 5.4 inclusive,
  [OMB ORDER, NO. 10, 11 OCTOBER, 1979, SECTION 2.4.2.7.2 IN PART]
- [MINISTERIAL MODIFICATION, NO. 4, AUG 30, 1976, SECTION 2.4.2.7 2 IN PART]
- alteration of the natural features should be minimized in order that the character of the rural landscape be preserved,
- it should be consistent with the need to protect public health and safety, i.e., to avert ground-water pollution, avoid hazard lands, and be located away from incompatible land uses.

2.4.2.7.3 Local Official Plans

Council considers that decisions about the designation of specific locations for country lot development are primarily of local concern to be determined by the area municipalities in relation to local planning

objectives, subject to their being in accordance with regional objectives.

It is therefore Council's intention that all country lot development shall be on the basis of local official plans prepared by the area municipalities and approved by the Region. These plans shall be prepared in accordance with the regional objectives outlined in Section 2.4.2.7.2 above and without limiting the application of any regional objectives and/or policies contained elsewhere in this plan, local plans shall be in accordance with the following:

. Country lot development shall be located primarilly within the marginal resource areas designated on Schedule A; however, it is recognized that within the agricultural resource areas designated on Schedule A there are locations where because of local soil conditions or topography the land cannot be farmed economically. Council intends that such areas may be designated in local official plans for country lot development without amendment to this plan.*

. Country lots should be located in areas offering natural amenities such as varied topography, mature tree cover and scenic views. In particular, there should be sufficient tree cover and rolling terrain to enable the housing to blend with the natural landscape such that the housing is screened from view and the rural environment left relatively undisturbed. It is Council's intention that country lots not be located on featureless or sparsely treed sites. However due to the special character and scenic quality of the Rideau River Corridor, country lot development may be permitted on parcels of land in the Rideau River Corridor which do not have sufficient tree cover and rolling terrain, provided that a variety of lot sizes in the range of 0.8 to 1.5 hectares or greater, are created to provide an opportunity to improve the aesthetic siting of buildings. Access to Regional Roads shall be minimized by requiring internal roads or shared accesses.

[OPA #40, 11 DECEMBER 1984, SECTION 2.4.2.7.3 IN PART]

*It is intended that this provision be used to designate fairly substantial pockets of poor land and not small areas on individual farms. It is considered that the random scattering of non-farm housing throughout the agricultural resource areas, even if it were all located on small pockets of poor land, would not be in the long term interests of the rural economy.

- Country lot development should be located only on soils which are suitable in their natural state for development on the basis of individual septic tanks and wells.* However, the requirement for the provision of individual wells shall not apply to those lands designated for country lot development in the City of Nepean Official Plan, as approved by Regional Council on 23 June, 1976. Since the extent of the marginal resource areas on Schedule A is many times that needed for country lot development, Council considers it unneccessary to consider locations with soils which in their natural state are unsuitable for residential development. Technological advancements may some day reduce or even remove the dependence of private waste disposal systems on soil and water table conditions, and thus permit areas which are otherwise desirable for this form of development to be so utilized.

  [OPA #6, APRIL 23, 1979, SECTION 2.4.2.7.3. IN PART]

- Country lot development should only be located where there is proven availability of an adequate quantity and quality of groundwater for private wells. This provision shall not apply to those lands designated for country lot development in the City of Nepean Official Plan as approved by Regional Council on 23 June, 1976.

  [OPA #6, APRIL 23, 1979, SECTION 2.4.2.7.3 IN PART]

- Country lot development should not be located where village expansion is planned.

  [MINISTERIAL MODIFICATION, NO. 5, AUG 30, 1976, SECTION 2.4.2.7.3 IN PART]

- Country lots should not be developed in locations where heavy public expense would be required to provide the necessary road access and other community facilities. The ideal location is considered to be one which is handy to one of the village communities designated on Schedule A but not immediately adjacent to it.

*It is recognized that remedial measures, such as constructing raised septic tank tile beds from off-site fill, can often overcome inherent soil problems. However, it is Council's opinion that this practice has undesirable affects both on and off the the site including topsoil depletion, inappropriate disruption of the natural landscape, unnecessary tree cutting, and disruption of the natural storm drainage system.

- Country lot development should avoid locations near incompatible land uses. These include locations near industrial uses, extractive industries, railways, major highways, or within airport noise zones or hazard land designations. Of particular importance is the relationship of country lot development to farm operations (particularly intensive operations). In this regard, although the recommended practices contained in the Agricultural Code of Practice for Ontario* are intended to apply to farm operations, Council believes it is implicit that non-farm development must also respect the policies for separation of farms from housing. Thus the provisions of the Code should be followed when selecting locations for country lot development.

- Because of the extent of the marginal resource areas on Schedule A** it is Council's intention that activities related to the rural economy should take precedence over country lot development. For example, country lot development should avoid locations which will conflict with farm operations or extractive industries.

- In order to maintain the rural character of the landscape, the physical and visual impact should be minimized by disturbing the natural features of the sites as little as possible and by careful siting of the buildings. Under no circmstances should country lot development introduce an urban appearance to the landscape; neither should it create small village communities*** Council considers that this objective can only be met if great care is given to site plan considerations at the time of development. Accordingly, Council will require that site planning criteria for country lot development be included in the local official plans.

- Country lot development must be in accordance with the regional environmental management policies set out in Section 5.6.

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*The purpose and the provisions of the Code are more fully discussed in Section 5.6.6. The code itself is set out in Appendix B.

**Marginal resource areas represent approximately 23% of the total rural area on Schedule A.

***Creation of small villages through country lot development would lead to demands for community facilities; it is intended instead that those villages designated on Schedule A serve as foci for country lot development.

- As indicated in Section 2.4.2.3, recreation or leisure-oriented development in the rural part of the planning area is considered to be a desirable form of country lot development. Council recognizes it as a valid form of rural residential development but is aware that its impact on the rural landscape is somewhat greater than with other forms of country lot development*. Nevertheless, Council will consider local official plans which provide for a portion of the country lot development to be of this type.

2.4.2.8 **Hamlets**

Council intends to permit a limited amount of residential infilling in hamlets identified in area municipal official plans and approved by the Region. Local official plans shall include:

- policies for the amount of infilling in identified hamlets, and the total allocation of hamlet population in relation to village and country lot population allocations.

- a plan designating areas where infilling would be permitted.

- policy provisions to ensure that this infilling:

  (1) will be accommodated in a manner which respects the heritage of the existing communities;

  (2) will be on the basis of individual private services, subject to the approval of the appropriate regulating authorities;

  (3) will take into consideration the need to protect public health and safety, i.e., to prevent groundwater pollution, avoid hazard lands, and not create dangerous traffic problems;

  (4) will proceed only with the creation of lots primarily by the consent (severance) process;

  (5) will not generally result in the construction of new roads;

  (6) will avoid locations which will conflict with farm operations, mineral extraction areas, conservation lands, or other incompatible uses.

[OPA #3, MARCH 1, 1979, SECTION 2.4.2.8 ALL]

*For example, a rural housing development associated with a golf course takes on a rather suburban appearance and substantially alters the existing landscape.

2.4.2.9 **Infilling Areas Outside Hamlets**

Council recognizes that in addition to hamlets there are existing clusters of residential development in the rural parts of the planning area where limited residential development may be permitted without prejudicing the objectives for rural residential development stated in Section 2.4.2.2.

Council therefore proposes that:

- residential infilling outside hamlets be permitted providing policies for same are first set out and elaborated on in approved local official plans;
- such local plans shall require areas for infilling to be identified in restricted area by-laws;
- infilling areas be permitted only in areas which this Plan designates as marginal resource area or agricultural resource area including these designations with the "(river corridor)" suffix; or in areas designated mineral resource area providing appropriate engineering data indicates that the subject lands are not viable for commercial resource purposes;
- infilling areas respect all other policies of this Plan;
- infilling areas be identified only where several existing dwellings are compactly grouped and not include land so as to permit extensions in length or depth beyond the limit of existing development;
- the area and depth of new lots permitted in the infilling areas not be significantly smaller than the existing residential lots in the same designated area; and
- any lots created be in accordance with Section 2.4.2.4 and Table 2-6 of the Regional Plan (i.e. within each area municipality's country lot allocation).

[OPA #20, APPROVED BY THE OMB, 7 AUGUST 1985 SECTION 5.4.8 ALL]

2.4.2.10 **Summary of Rural Residential Policies**

In summary Council intends that:

(1) Rural residential development be of four broad types: farm and other housing directly related to the rural economy, country lot development as defined in Section 2.4.2.7.1, village development and infilling in hamlets.

(2) Demand for small-lot rural living be met by expansion of the village communities designated on Schedule "A".

(3) The amount, staging and distribution of rural residential development be in accordance with Sections 2.4.2.4 and 2.4.2.5, and Tables 2-5 and 2-6.

(4) The village component of rural residential development occur in the villages designated on Schedule "A" and the country lot component occur primarily within areas designated marginal resource areas on Schedule "A". A limited amount of new residential development will be permitted in hamlets provided that the population allocations for each area municipality are not exceeded.

(5) Recreation and leisure-oriented rural housing proposals all be considered to involve permanent housing and be treated as a variety of country lot development.

(6) Village, country lot development and infilling in hamlets take place on the basis of local official plans prepared by the area municipalites (in accordance with the policies contained in Sections 2.4.2.6.3, 2.4.2.7.3, and 2.4.2.8 of the plan) and approved by the Region. (Interim policies for country lot and village development, to apply until local official plans can be prepared and approved, are set out in Section 6.5.3 of Part 6 - Implementation.)

(7) Village expansion be on the basis of individual private services except for those villages which already require communal services for the sake of the health and safety of the existing population and further, under no circumstances should a village expand through the 1,000 population threshold, nor should there be further expansion of any village having a 1974 population above 1,000,* in the absence of information on how much additional growth can be safely accommodated on private individual services.

[OPA #3, MARCH 1, 1979, SECTION 2.4.9 IN PART]

[OPA #20, 18 JULY, 1983 SECTION 2.4.2.9 IN PART]

(8) Notwithstanding policies elsewhere in this Plan the following be permitted:

(a) A movie studio and associated uses in the north-quarter of Lot 19 and the south-half of Lot 18, Concession V (R.F.), being Part 1 of Reference Plan 5R-819 in the City of Gloucester

(b) and only in conjunction with the above, residential accommodation as approved by Council and the City of Gloucester being:

*With the exception of any villages for which, because of the size of their 1974 populations, the Region provides communal services with capacity for some expansion.

(i) a plan of subdivision in Lot 21, Con. V (R.F.) developed in accordance with The Planning Act having a maximum of 105 units, and

(ii) rental housing in Lot 21, Con. V (R.F.) developed in accordance with site plan provisions of The Planning Act to a maximum of 185 units.

(c) the land described in (a) and (b) above shall not be used for any purpose unless full municipal services including central water and sanitary sewers connected to the trunk water and sewer systems are constructed and available to serve the land, building and structures as the case may be.

[OPA #22, 26 MAY, 1983 SECTION 2.4.2.10 (8) ALL]

(9) Notwithstanding policies elsewhere in this plan, village growth in Goulbourn, in accordance with Tables 2-5 and 2-6, shall be based on the three villages of Ashton, Munster and Richmond. The approved population level for Stittsville shall be 10,000 persons.

(10) Amendments to the Goulbourn Official Plan which would have the effect of expanding the boundaries of the developed area in village plans will not be approved unless the policies of this Plan are amended.

[OPA #49, 10 SEPT, 1985, SECTION 2.4.2.10(9) AND(10) ALL]

2.5 EMPLOYMENT AND WORK AREAS

The goals and sub-goals stated in Part 1 as they relate to employment give rise to three main objectives:

- adequate provision for expansion and diversification of jobs,
- the distribution of jobs throughout the planning area,
- the provision of a policy framework for the major elements of the plan in which jobs will be provided.

2.5.1 EXPANSION AND DIVERSIFICATION

It is expected that the number of job opportunities will increase from approximately 198,400 in 1971 to 450,000 by the time a population threshold of one million is reached.

Table 2-7

Estimated employment in the Planning Area 1961, 1971 and at threshold population of one million

Groups	1961	1971	Threshold	Increase (Decrease) 1971 – Threshold
Employment Total	138,031	198,400	450,000	251,600
Primary	3,486	3,000	2,000	(1,000)
Manufacturing	11,616	13,500	25,000	11,500
Construction	9,088	13,000	25,000	12,000
Transportation, Utilities and Communications	9,703	13,200	30,000	16,800
Trade	18,693	27,400	65,000	37,600
Finance,Insurance, Real Estate	6,774	10,000	30,000	20,000
Other Service	78,701	118,300	273,000	154,700

This forecast is based on the following premises:

- Federal employment* will continue to increase from an estimated 73,000 in 1971 in the National Capital Region to 145,000 at the threshold population level. The location of 36,000 federal jobs in Communauté Régionale de l'Outaouais will result in 109,000 federal jobs locating in the planning area. The rate of increase in the National Capital Region is equivalent to 2% compounded annually over 30 years.

- Non federal employment will increase more rapidly than federal employment in the planning area because:

  i) the urban area has reached a sufficient size to attract and generate employment outside the federal sector at a faster rate,

  ii) the rate of growth of federal employment in the planning area will be less than in recent years because (a) an increasing proportion of National Capital Region federal employment will locate in Communauté Régionale de l'Outaouais, and (b) increasing decentralization to other parts of Canada is anticipated.

It is expected that of the 251,600 new jobs approximately 70,000 will locate on industrial land. Industrial densities vary considerably depending on the type of industry, the amount of shift work involved and the amount of land held for future expansion. Fifty workers per hectare would generally represent a full development and thus this plan should provide a minimum of 1,400 hectares for future industrial development.

*Federal jobs - Permanent jobs, Schedules "A", "B", "C", and "D" Financial Administration Act plus other identifiable Federal Agencies. Excludes military personnel and "on contract" personnel.

Of the 28,000 new jobs in the retail sector approximately 2,000 will likely locate in the central area. The bulk of new jobs created in this sector will locate in shopping centres, district centres, and in major commercial areas and will be geographically closely related to the increase in resident population.

A major part of the increase in jobs falls in the "other service" classification in Tables 2-7. Besides including Federal employment this group also included community, personal and business services and provincial and municipal government service, all of which are predicted to continue to grow quickly. Some of this employment will locate in offices, some with shopping and in special purpose buildings (such as hotels), some in institutions such as schools, colleges, and hospitals.

The employment mix predicted for a one million threshold has the following characteristics:

- primary industries, mainly agriculture, will have declined both absolutely and relatively,
- jobs locating on industrial land, mainly manufacturing, warehousing, research and development, construction, and utilities, will have increased to total 20% of total jobs,
- service jobs, mainly retail trade, finance, community, business, and government service, will have increased most, to total approximately 60% of all jobs,
- federal jobs*-although increasing by 36,000 will decrease as a total proportion of all jobs from approximately 35% in 1971 to approximately 25% when the threshold is reached.

2.5.2 DISTRIBUTION OF EMPLOYMENT

The distribution of employment proposed in this plan is fundamental to attaining other aspects of the plan, notably the attainment of a public transit orientated transportation system and the creation of viable urban communities outside the greenbelt. The main purposes and considerations in formulating the recommended distribution are:

- transportation considerations,
- recent trends,
- the need to create activity centres as foci for newly developing areas.

*As defined above.

Transportation Considerations

The goals for transportation dictate a solution to the problems posed by urban growth that should be public transit oriented and this implies that the large majority of work trips be made by public transit. To make this possible many job locations must be capable of being served by public transit and preferably by rapid transit. Major employment centres should therefore be located in close proximity to stations on rapid transit routes. It is considered that development of rapid transit in itself will naturally influence the distribution of employment in the desired directions.

Council's objective is to maintain a level of employment in the greater central area* which would result if the transit guidelines enunciated in Part 3 of this plan are achieved and no additional roads over those shown on Schedules "C" and "D" are constructed. In 1974 studies showed that approximately 100,000 jobs could be accommodated in the central area without prejudicing the above objective. Council intends to review from time to time the levels of employment in the greater central area with regard to the achievement of this objective.

A substantially higher level of employment in the greater central area would result in demand for transportation services which cannot be met without more major improvements to the road system than are proposed in this plan.

This solution is both expensive, especially in terms of property acquisition, and disruptive to communities and consequently contrary to the goals of this plan.

Recent Trends

Employment growth in the fully developed parts of major urban areas has been less rapid than in the developing suburbs. In the greater central area of Ottawa total employment increased by 19,161 jobs between 1963 and 1971, an increase of 26.3%. In the remaining part of the urban area employment increased by 33,112 jobs, an increase of 50% in the same period.

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*Definitions used in this document include:

- central area - bounded by Bronson, Gloucester, Laurier, east of the Canal, King Edward, St. Patrick, and the Ottawa River.
- greater central area - bounded by Bronson, Queensway, Rideau River, and the Ottawa River.
- Ottawa-Hull greater central area - the greater central area plus the island of Hull bounded by the Ottawa River and Brewery Creek.

In Metropolitan Toronto employment in the inner three municipalities* actually declined between 1960 and 1964 by 14,000 jobs or almost 3%. Meanwhle in the same period employment increased in the suburban municipalities**by 37,000 jobs or approximately 5.5%. Similar figures apply in other cities both in Canada and abroad.

The main reasons for this are:

- Many jobs are oriented to serving people, e.g. shopping centres and schools. Most recent population growth has been, and most future growth will continue to be, in the suburbs and the new urban communities.

- Many types of employment require relatively large land areas for their plant, e.g. industry or universities. Sites of suitable size are easier to acquire in newly developing areas.

- The factors which determined the location of industries a generation or more ago have changed, e.g., transportation is more oriented to trucking than to railways, single storey buildings are more suited to automative processes, and site requirements have consequently increased more rapidly than building floor space needs. This has led to a movement of established industries to new sites in the suburbs.

- Redevelopment of inner areas while providing for more employment generally of the office type, often displaces employment of a retail, service and industrial nature so the net increase in employment may not be as great as the magnitude of new development might lead one to suppose.

These trends are likely to continue and it is considered that they can have a beneficial effect if development is encouraged at locations selected for their future accessibility rather than at random locations.

Creation of Foci in Newly Developing Areas

In order to further encourage the trends noted above to provide centres of activity in suburban areas and in particular in the new urban communities outside the greenbelt a concentration of retail and service employment should be encouraged. These centres should, where possible, be located along rapid transit lines to encourage the maximum use of the public transit system.

It is therefore concluded that as employment levels increase in the planning area, the opportunity will exist to achieve a distribution of work places that is convenient for residents and can also encourage use of the public transit system. The policies of this plan and regional works programs can help to bring about a distribution of new job opportunities that will suit the needs of the residents of the planning area in the future.

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*City of Toronto, Boroughs of York and East York.

**Boroughs of Scarborough, North York and Etobicoke.

However, there is also the need for these policies to be compatible with the requirements of industry and business, and if the desired distribution of employment is to be achieved, policies in this plan must be supported by parallel policies of other levels of government involved in the development of the planning area. Council has requested the support of the federal government in this regard.*
[OPA #30, 16 MARCH, 1983, SECTION 2.5.2 IN PART]

It is Council's opinion that a distribution of employment which is both desirable and achievable is as shown in Table 2-8.

Table 2-8
Employment Distribution

	1971		Threshold one Million	
	Number	%	Number	%
Greater Central[a] Area	92,000	46.5	147,000	32.7
Elsewhere within the Greenbelt	99,000	50.0	211,000	46.9
Urban Communities outside the greenbelt	[b]		83,000	18.4
Rural	7,000	3.5	9,000	2.0
TOTAL	198,000	100.0	450,000	100.0

[a] The equivalent Central Area figures would be 1971 68,000 34.3%, Threshold approximately 100,000, 22.2%

[b] Less than 1,000

Within this overall distribution, Council endorses the principle that the economic activities of the planning area should be centred as far as possible in relatively few concentrated locations, and that these locations should be interconnected by an effective system of public transport as well as roads.

It is expected that about ten percent of the new jobs will be located primarily to serve residential areas in schools and local shopping centres and business areas. The location of these is primarily a matter of local community planning and, therefore, of decision by the area municipal councils. However, the remaining ninety percent can and should desirably be concentrated in the principal industrial, governmental, business, and institutional areas of the planning area. The location and size of these areas is a concern of the region as a whole, and as such are subject to policies of this plan.

The policies for the principal institutions, hospitals, universities, and colleges are outlined in Section 4.3. Policies with respect to the remainder are set out below under the headings of The Central Area, Office Areas, Industrial Areas, Commercial Areas, and Other Extensive Use Areas.

*Report 12/135 to Regional Council Meeting 12 December 1973.

When land use policies are formulated for the second stage of urban development in the planning area, Council intends that employment centres will be designated within the new urban communities. This is consistent with the policy, expressed elsewhere, of creating major employment centres in the urban communities outside the greenbelt.

It is anticipated that policies expressed in this plan will result in an employment distribution within the outer limit of the greenbelt as shown in Table 2-9.

Table 2-9

Expected Employment Distribution by type within the outer limit of the greenbelt

	Total		Industrial		Retail		Other Service	
	1971	Proposed	1971	Proposed	1971	Proposed	1971	Proposed
Greater Central Area [a]	92	149	1	–	8	12	85	137
Employment Areas	83	182	18	57	9	21	54	104
Residential Districts	16	27	–	–	4	7	12	20
TOTAL	191	358	19	57	21	40	151	261

(above figures in thousands)

[a] The equivalent central area figures would be –

1971 Total 68,000 Industrial 1,000 Retail 6,000 Other Service 61,000

Proposed Total 100,000 Industrial – Retail 10,000 Other Service 90,000

[OMB ORDER, NO. 12, 11 OCTOBER, 1979, TABLE 2-9, SECTION 2.5.2 IN PART]

Council intends that the figures contained in 2-9 act as a guide with regard to the amount of land designated on Schedule "B" of this plan for uses which generate employment.

Experience has shown that employment in urban communities is not directly related to population; rather a large urban community attracts a proportionately larger amount of employment than a smaller one because: (1) the provision of services in larger urban centres is higher, and (2) larger urban centres can attract additional employment generators since population and services, e.g., transit, business services, are there to support it. Figure 2-1 below illustrates this relationship for a number of Ontario communities. It is an objective of this plan to attain a public transit oriented transportation system and to achieve viable urban communities outside the greenbelt. These objectives will be best achieved by high employment levels in the urban communities outside the greenbelt. Thus, assuming that employment figures at the top of the range shown in Figure 2-1 will best meet regional objectives, Table 2-10 illustrates the expected employment distribution in the urban communities outside the greenbelt in relation to their size.

FIGURE 2-1

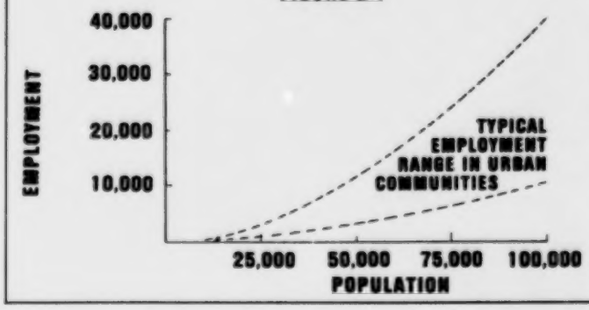

Table 2-10
Expected Employment Distribution by type in urban communities outside the greenbelt by size

Urban Community by Population Size	Total Employment	Industrial	Retail	Other Services
25,000	2,000	1,000	250	750
50,000	10,000	5,000	750	4,250
75,000	20,000	9,000	2,000	9,000
100,000	35,000	13,000	4,000	18,000

Council intends that the figures in Table 2-10 represent minimum employment goals, rather than employment limits, for the large urban communities outside the greenbelt (West Urban Community, the East Urban Community, and the South Urban Community which is reserved for future development). Similarly, the figures in Table 2-10 are intended to represent minimum employment goals for the Barrhaven Community, provided that employment levels beyond those shown for the Barrhaven Community do not detract from the employment objectives of the large communities. Thus Council will consider land use designations involving employment levels in the Barrhaven Community beyond those shown in Table 2-10 provided that the experience in attracting employment to the larger communities has proven satisfactory.
[OMB ORDER, NO 47, 11 OCTOBER, 1979, SECTION 2.5.2 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 2.5.2 IN PART]

2.5.3 **THE CENTRAL AREA***

Council supports development of the central area as a functionally and visually varied centre of the planning area and National Capital; as a place of symbolic and physical interest for residents, the nation as a whole and visitors from foreign lands. The central area should be an important centre for shopping, the major location of government and business administration, the focus for entertainment and cultural pursuits, and be supported by stable residential districts on its periphery.

*Central area refers to land designated central area on Schedule "B" which corresponds to the definition of central area on page 2-39.

Although the volume of retail sales in the central area has risen, the areas's share of the total retail market has dropped considerably during the past twenty years. Council recognizes the importance of a strong shopping function in the central area. While it is assumed that the central area's portion of total retail sales will continue to decline, Council supports policies which will lessen the rate of relative decline and increase more rapidly than has been occurring in the past, the absolute volume of retail sales in the central area. To realize this potential, it is important that retailing be strengthened in the central area.
[OPA #8, OCTOBER 24, 1979, SECTION 2.5.3. IN PART]

With the growth of government and business employment to a level of approximately 100,000 an additional 560,000 square metres of office space is projected as necessary. A key consideration is the location of employment centres in association with transit stations to ensure heavy usage of the public transport system. Although at this time, transit stations for the underground section of the rapid transit system through the central area have not been specifically located, it is anticipated that there will be two stations west of the Rideau Canal and one east of the Canal. It would be desirable to have future employment in approximately the same proportion as the level of public transport service in each of the two main sections of the central area.
[OPA #8, OCTOBER 24, 1979, SECTION 2.5.3 IN PART]

The entertainment and cultural function of the central area will expand. There will be demand for hotels, convention centres, restaurants, theatres, art galleries, and museums. Although facilities for these purposes will be needed throughout the central area, there would be an advantage in having a preponderance of them occur in one part of the central area.

The residential function of the central area can also be expanded with advantage. New population within the area and in close proximity to it will create demands for retail, cultural, and other services and impart a liveliness to the area. For those who wish to live close to the centre of activity in the planning area, the policies of this plan provide that land may be developed for new housing as well as for governmental and business purposes.

In order to reinforce the employment function of the central area, Council is of the opinion that a limited range of light industrial uses be permitted. Light industrial uses include the manufacture, processing and repair of products in industries that are compatible with the existing office, cultural and retail activities. Industry in the central area therefore, must be characterized by: minimum shipping, receiving and storage requirements, high value-added and non-polluting activity. Recognizing the potential cumulative effect of industrial uses, it is desirable to assess their effect from time to time.
[OPA #15, AUGUST, 1980, SECTION 2.5.3 IN PART]

Many of the public services required for growth of the central area are the responsibility of Council to provide: major roads, public transport, and water and

sewer services.

The public transport and road system proposed in this plan can support the increase in employment without a deterioration in level of service, and the provision of adequate water and sewer systems poses no problem. However, improvements will be required in parking to increase short-term supply and decrease all-day parking. To make the area more attractive and the use of public transport more widespread, pedestrian systems and open spaces will require to be improved also.

The scale of development in the central area will create opportunities for change and, in turn, improved appearance and design. While high standards of urban design cannot be achieved through the medium of an official plan, the plan makes a commitment to seeking such standards, and the carrying out of works, as well as the regulation of building, are means by which the commitment can be realized.

Urban design is not concerned only with the new. Design should reflect the different functions within the central area, and where a function and character is already established, it can be accepted, improved and integrated with new development. Such an area is By-Ward Market, north of George Street and east of Sussex Drive, and its unique characteristics should be preserved and enhanced.

The foregoing might apply to almost any central area of a major Canadian city. But what is unique about the Region's central area is that it is the central area of the nation. In this context, the dominance of Parliament Hill must be recognized.

The central area today suffers deficiencies: there is a mixture of uses without clear definition of function; there is lack of open spaces and of any substantial quantity of housing; there is no common policy towards historical buildings and areas; and there is inadequate short-term parking for shoppers and visitors. There is also inadequate connection between its two main parts - east and west of the Rideau Canal; it has no distinct visual boundary; it lacks activity throughout the day; and, in spite of the special legislation by which building design has been coordinated, the design of buildings, street furniture, and other aspects of the total urban environment can be improved.

Council is of the opinion that there is a firm base on which to develop a unique central area; for example, the principle of pedestrian/vehicle segregation of the Sparks Street Mall can be extended in other areas, and the provision of rapid transit on a separate right-of-way can be used as an opportunity to develop further the system of pedestrian/vehicular separation. Major growth in the central area can act as a catalyst to bring about many of the goals desired. However, the full potential to achieve improvement in the central area rests upon the cooperation of the governments and business involved in its development. That several parts of the central area are in public ownership creates an unusual opportunity to ensure that the best possible development is achieved.

Council therefore:

(1) designates on Schedule "B" the central area to be used for retail, office, entertainment, cultural, residential and a limited range and number of light industrial uses.
[OPA #15, AUGUST, 1980, SECTION 2.5.3 (1) IN PART]

(2) will request the National Capital Commission and the City of Ottawa to enter jointly with Council in the preparation of a detailed plan for the central area. Following completion of the central area plan, appropriate amendments will be prepared to this plan and to the City of Ottawa's official plan.
[MINISTERIAL MODIFICATION, NO. 6, AUG 30, 1976, SECTION 2.5.3(2) IN PART]

(3) requires that no public works be undertaken which do not have regard for the effect of their execution and design on the appearance and quality of the central area environment.

(4) when approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, shall ensure:

i) the adequacy of regional roads, public transit, and sewer and water systems for the proposed use and density;

ii) the appearance , amenity, and functional structure of the central area is enhanced;

iii) the adequacy of parking, access to public roads, traffic lanes, and landscapping proposed to be provided, as it relates to those transportation and servicing matters which are under regional jurisdiction.

[OPA #30, 16 MARCH, 1983, SECTION 2.5.3(4) IN PART]

2.5.4 OTHER SPECIALIZED AREAS

2.5.4.1 Office Areas

The federal government is the most important owner and tenant of offices in the planning area. Over the years, consistent with the Gréber plan for the National Capital*, suburban office complexes have been developed at such places as Tunney's pasture, Confederation Heights and Booth Street. Council intends that the decentralization of Federal offices continue and in addition it is hoped the private sector can contibute to the process of decentralization.
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.1 IN PART]

*Jacques Gréber, Projet d'Aménagement de la Capitale Nationale, Ottawa, 1950.

It is anticipated that during the planning period, existing office complexes now developed by the government of Canada will continue to grow as employment centres. Additional employment centres will be needed if the employment distribution envisaged by Table 2-8 is to be created. However, it is not essential that the new employment centres be exclusively devoted to office uses, but rather it is preferable that they develop as integrated complexes of office, commercial, institutional, and residential uses - see below District Centre.

Council therefore:

(1) designates on Schedule "B" office areas which are to be primarily used for major office uses;

(2) when approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, shall ensure:

[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.1(2) IN PART]

i) the adequacy of regional roads, public transit, sewer and water systems for the proposed use and density;

ii) the adequacy of parking, access to public roads, traffic lanes, and landscaping proposed to be provided, as it relates to those transportation and servicing matters which are under regional jurisdiction.

[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.1(2) (ii) IN PART]

2.5.4.2 Industrial Areas

In 1971 there were approximately 730 hectares of land used by industries (not icluding extractive industries) in the planning area. It is expected that the local economic base will continue to grow and diversify in the next 25 years and there will be a demand for industrial land from many sectors of the economy. The following sectors of the economy will have substantial industrial land needs: manufacturing, construction (particularly if industralized housing becomes more common), transportation and utilities, wholesale trade, public administration (particularly the federal government for its warehousing and storage needs), and the service section (particularly research and development industries and business services).

Council is of the opinion that the sites shown on Schedule "B" totalling approximately 2,800 hectares will provide for a large area during the industrial land needs of the planning area during the planning period. In addition, industrial land may be designated by amendment to this plan in the future urban communities when future designations are warranted and services are available.
[OMB ORDER, NO. 13, 11 OCTOBER, 1979, SECTION 2.5.4.2 IN PART]

Because there are many types of uses, a variety of industries could locate in an area designated industrial. This could lead to a decline in environmental, visual and design standards. Heavy and noxious industries should be provided for in this plan, but they should only locate in certain areas. It is intended that these types of industries will be confined to those areas designated "general industry".

Heavy and noxious industries should be carefully located even within areas designated general industry to mitigate against possible adverse effects on other industries and residential areas in close proximity to the plant.

Certain federal establishments, for example the National Research Council, and private companies, for example Bell Northern Research, have established research centres which create no nuisance and have high standards of design. Existing sites have been placed in a "restricted industry" category to set them apart from other types of industrial development. These types of research and technologically oriented industries are expected to increase in the planning area and provision is accordingly made for them in this plan.
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.2 IN PART]

The industrial land needs of rural areas are different from those of the urban area. The development of a large industrial park may require urban services not generally available in rural areas. However, industries using local resources such as agricultural produce, timber or minerals or providing a local service such as trucking, construction or electrical contracting, are a necessary part of the rural area. In addition, industries which require large areas of land may also be appropriately located in the rural area.

The need for and location of rural industries are primarily a matter for determination by the area municipalities through local official plans and restricted area by-laws. If an area muncipality wishes to designate additional land for rural industrial purposes, the Council of the area municipality, (when submitting an official plan amendment for approval) shall justify that there is a need for the additional land by taking into consideration the amount of designated but undeveloped industrial land within its boundaries, its distribution and the demand for unserviced industrial land.
[OPA #16, 14 JULY, 1981, SECTION 2.5.4.2 IN PART]

For those villages where full municipal services are available and more diversified employment opportunities are therefore desirable due to the expected size of their populations, certain types of industries such as light manufacturing plants, warehouses, construction and building material yards, and establishments with a scientific or research orientation, are considered appropriate. Heavy and/or noxious industries are not desirable in village locations. The location of these industrial areas is to be provided for by the area muncipalities in the local official plan.
[OPA #4, MAY 8, 1978, SECTION 2.5.4.2 IN PART]

Council is of the opinion that monopoly ownership of land may reduce the availability and choice of land and result in higher prices being charged for land which is available for development. While a variety of policies may be included in an official plan, Council is of the opinion the most appropriate ways of reducing the negative effects of monopoly ownership of land are: i) to designate sufficient land at a variety of locations for industrial development in this Official Plan and local official plans, ii) area municipalities should become actively and continuously involved in the ownership and development of industrial lands in the urban and rural areas of the Region. Municipal acquisition and development of industrial land will create competition and decrease the potential for monopoly ownership of industrial lands by a limited number of private ownerships.
[OPA #16, 14 JULY, 1981, SECTION 2.5.4.2. IN PART]

Council therefore:

(1) Designates General Industry or Restricted Industry the areas shown on Schedule "B" to be used primarily for industrial uses.

(2) May approve local official plans which designate land Restricted Industry which is designated General Industry in this plan, without amendment to this plan.

(3) When approving or commenting on local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws and site plans or amendments to one or more of them, may permit rural industries in areas designated on Schedule "A" of this Plan as marginal resource, village or mineral resource where appropriate engineering data indicates that the subject lands are not viable for commercial resource purposes, unless the industry requires the extraction of the minerals in the manufacture of their products subject to the concurrence of the area municipality.
[OPA #16, 14 JULY, 1981, SECTION 2.5.4.2 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.2(3) IN PART]

(4) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, shall ensure:
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.2(4) IN PART]

i) the adequacy of regional roads, public transit, water, and sewer systems for the proposed use and density;

ii) the adequacy of parking, access to public roads, traffic lanes, and landscaping proposed to be provided, as it relates to those transportation and servicing matters which are under regional jurisdiction;
[OMB ORDER, NO. 11, 11 OCTOBER, 1979, SECTION 2.5.4.2(4) (ii) IN PART]

iii) whether the proposed use is compatible with adjacent land uses;

iv) in areas not served by municipal piped water and sewage services, that the approval of sewage disposal and water supply systems meets the requirements of the authority having jurisdiction over such systems. Permitted industries may be restricted to industries which do not use water as a part of their process;

v) adverse effects of heavy or noxious industries are minimized through control of their location;

vi) there will be no likelihood of discharge of obnoxious or contaminating industrial wastes into any watercourse or the atmosphere;

vii) that in areas not served by municipal piped water and sewage services, area municipal councils when submitting an official plan amendment for approval which results in the designation of additional land for rural industries have justified that there is a need for the additional land by taking into consideration the amount of designated but undeveloped industrial land within its boundaries, its distribution and the

demand for unserviced industrial land.
[OPA #16, 14 JULY, 1981, SECTION 2.5.4.2. IN PART]

(5) When approving or commenting on local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, may permit industries (in addition to rural industries as defined in policy (3) Section 2.5.4.2) in or adjacent to areas designated as village on Schedule "A" of this plan only where full municipal services are available. No heavy and/or noxious industries are to be permitted in such areas.
[OPA #4, MAY 8, 1978, SECTION 2.5.4.2(6) ALL]
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.2(5) IN PART]

(6) Encourages an active and continuous involvement by area municipalities in the ownership and development of industrial lands in the urban and rural areas of the Region.
[OPA #16, 14 JULY, 1981, SECTION 2.5.4.2. IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.2 IN PART]

2.5.4.3 **[There is no Section 2.5.4.3 included in the plan document]**

2.5.4.4. **Commercial Areas**

2.5.4.4.1 **All Commercial Areas**

Commercial facilities include, among other things, stores and shopping centres, gas stations, and other sales and service outlets dependent on the automobile. Their total numbers and distribution are important because:

- over 10% of jobs are provided in these establishments and the future distribution of jobs is an element of this plan,
- by their nature, these establishments can generate large volumes of automobile oriented trips and could cause transportation problems if their number and distribution were not controlled,
- a strong retail function in the central area is an element of this plan that could be frustrated by uncontrolled development of commercial facilities elsewhere.

For these reasons an examination* has been made of commercial development in the planning area. The conclusions of the study are based on the following assumptions:

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*Walter A. Smith and Company Ltd. "A Study of the Development of Retail Faciiities in the Ottawa-Hull Region."

- that a hierarchy of shopping centres can be identified and each type of shopping centre has an important function. The hierarchy includes regional, community, and neighbourhood shopping centres;

- the central area has a unique role to play in the overall hierarchy of shopping facilities in that it can and should be encouraged to provide for specialized shopping goods and better quality merchandise which requires all the metropolitan area*as a market;

- that future shopping patterns are predictable, based on forecasts of future population, future disposable income, and future transportation patterns; a knowledge of existing shopping habits; and an assessment of the sales per square metre of retail space to reach a condition of store saturation;**

- that the condition of "store saturation" is more desirable than an "overstored" or an "understored" condition.

The study was primarily concerned with the future need and distribution of regional shopping centres because:

- the larger regional centres containing two or more department stores and affording wider assortments of apparel, home furnishings, and other miscellaneous shopping goods, compete more directly with the retail function of the central area,

- community and neighbourhood shopping centres, being primarily oriented around providing convenience goods and services, of which food is the principal item, are more widely dispersed and compete little with the retail function of the central area.

The main conclusions of the study, include:

- expansion of retail floor space in the central area,

- two more regional shopping centres within the greenbelt can be supported in the planning period,

- additional community and neighbourhood shopping centres should be developed as population levels increase.

[OMB ORDER, 29 OCTOBER, 1981, SECTION 2.5.4.4.1 IN PART]

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*It is assumed that the Ottawa central area will continue to attract shoppers from Eastern Ontario and Western Quebec and remain the dominant shopping district in this area.

**Store Saturation - the condition when facilities are utilized efficiently and adequately to meet customer needs and at the same time yield a fair return without raising prices to achieve this return.

2.5.4.4.2 Regional Shopping Centres

Regional Shopping Centres, of which St. Laurent, Carlingwood, and Bayshore now exist offer a wide assortment of shopping goods and compete directly with the retail function of the central area. They each contain at least 23,225 square metres of gross leasable area and in order to provide sufficient parking, landscaping, buffering, and access points, sites are of the order of 16 hectares. In addition, community facilities such as libraries and clinics may be located there and the site may also act as a focus for public transit routes.

Since the timing and scale of additional regional shopping facilities (either through construction of new centres or expansion of existing centres) is dependent upon a number of variables, not all of which can be expected to change over time precisely as has been assumed, for all additions (other than minor ones) to the existing regional shopping base, Council will require that such additions be justified by a market study in order to allow Council to review their appropriateness.
[OPA #1, 11 OCTOBER, 1979, SECTION 2.5.4.4.2 IN PART]

The need for additional regional shopping centres has been defined. Additional locations which are considered appropriate to serve identified market needs are a site northwest of the intersection of Bank Street and Hunt Club Road, and a site within the Nepean portion of the South Urban Community. The specific location of the latter regional shopping centre will be designated at the time that a structure plan for that community is incorporated into this plan by amendment. The timing and size of these regional shopping centres, and of any subsequent expansions to them, will be determined on the basis of a review of the market studies submitted to Council at the time specific development submissions are made.
[OPA #1, 11 OCTOBER, 1979, SECTION 2.5.4.4.2 IN PART]

[OMB ORDER, 29 OCTOBER, 1981, SECTION 2.5.4.4.2 IN PART]

Because of the size and quantity of traffic attracted to regional shopping centres, they should be located close to freeway interchanges and adjacent to arterial roads. In addition, being focal points within the area, they should be located so they can be served by rapid transit.

The concentration of trafficin the vicinity of regional shopping centres will require that Council control access and consider the need for reserve traffic lanes, and the amounts and location of parking spaces on the site of the shopping centres.

Council therefore:

(1) Designates as regional shopping centre the sites shown on Schedule "B" to be used primarily for retailing and personal service establishments in a shopping centre of not less than 23,225 square metres gross leasable area. A small amount of office space may be included.

(2) When approving or considering local official plans, plans of subdivisions, plans of condominium, severances, restricted area by-laws and site plans, or amendments to one or more of them, shall ensure:
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.4.2.(2) IN PART]

i) the adequacy of regional roads, public transport, and water and sewer services for the proposed use and density,

ii) the adequacy of parking, access to public roads, traffic lanes and landscaping proposed to be provided, as it relates to those transportation and servicing matters which are under regional jurisdiction,
[OMB ORDER NO. 11, 11 OCTOBER, 1979, SECTION 2.5.4.4.2(2) (ii) IN PART]

iii) compatibility of the proposed use with adjacent land uses.

(3) When considering the designation of additional sites on Schedule "B" for future regional shopping centres, shall consider, among other things:

i) the adequacy of the size of the site for the purpose,

ii) its proximity to transportation facilities, particularly freeways and rapid transit routes,

iii) the impact of a regional shopping centre on surrounding land uses,

iv) the impact of the proposed centre on the retail function of the central area and other shopping centres.

2.5.4.4.3 Community and Neighbourhood Shopping Centres

Community and neighbourhood shopping centres are primarily oriented around providing convenience goods and services, of which food is the principal item, and some lower priced apparel and home furnishings merchandise. In general the market limits the total amount of floor space which can economically be provided, because such centres only draw upon a limited market area.

The principal concerns of this plan are that such centres not be expanded into regional shopping centres and that they be located and served adequately by the transportation system. The number of such centres and their sizes and locations are appropriately a matter for the area municipalities to determine within the policies of this plan.

Because populations in urban communities outside the greenbelt are proposed to be approximately 100,000, which size is not sufficient to provide a regional shopping centre, there is a strong possibility that the only shopping facilities which would be provided

would be a series of neighbourhood and community shopping centres, built consecutively as demand was created, unless policies are enforced to prevent that occurring. Council is of the opinion that such a distribution would not be in the interests of the people living in these communities, because they could not obtain a wider variety of shopping goods without travelling to shopping centres outside the urban community. Nor would it be in the interests of the Regional community because additional town centre functions - personal and business services, institutions, and entertainment - would lack any focus. This could defeat the policy of encouraging as much employment as possible to locate in the new urban communities. Therefore this plan includes a policy to deliberately restrict the amount of shopping space in residential districts which make up the urban communities outside the greenbelt with the objective that a major retal focus can be provided in the centre of each urban community.

Therefore, in summary, Council proposes that:

(1) Community and neighbourhood shopping centres shall have a size of 9,290 - 23,225 and 2,790 - 9,290 square metres of gross leasable ara respectively, and may be located in residential district and major commercial designations on Schedule "B" as provided for by the area municipalities in local official plans and may include office space related to community service needs.

(2) Only neighbourhood shopping centres of from 2,790 to 9,290 square metres of gross leasable area shall be permitted in residential districts of the new urban communities outside the greenbelt. Shopping centres larger than this will not be permitted.

(3) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws and site plans, or amendments to one or more of them, Council shall ensure:
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.4.3(3) IN PART]

i) the adequacy of parking, access to public roads, traffic lanes, and landscaping proposed to be provided as it relates to those transportation and servicing matters which are under regional jurisdiction,
[OMB ORDER, NO. 11 OCTOBER, 1979, SECTION 2.5.4.4.3(3) (i) IN PART]

ii) the adequacy of regional roads, public transport, water and sewer services for the proposed use and density,

iii) compatibility of the proposed use with adjacent land uses.

2.5.4.4.4 Major Commercial

While Council is primarily concerned with the development of any further regional shopping centres, there are a number of mainly existing commercial areas which are also of regional importance. Community shopping centres locating close together, concentrations of highway and related commercial activities and the continuous shopping facilities located on the major arterials which radiate from the central area have a regional importance by virtue of the cumulative effect of the individual establishments located within them.

It is Council's intention that major retail establishments which do not locate in the central area or the various shopping centres be located in these major commercial areas. It is expected that many of these uses will be related to highway travel such as hotels and motels, restaurants, builders' supply yards, gas stations, and repair garages. But community and neighbourhood shopping centres as described above will also be permitted. It is not intended, however, that areas designated major commercial should contain a substantial quantity of new office construction. The preferred location for office buildings is in office districts, district centres and the central area, where their concentration will support the policy of maximizing the use of public transport for work trips. However, a limited amount of office space related to local requirements will be permitted.

Council's main concern with major commercial areas is that major arterials along which major commercial areas are located, will be able to continue their function of moving traffic. Congestion can occur either through the increasing scale of commercial uses, or through too many access points being created. The creation of service roads may be required to ensure that function of the arterial is not impaired and access is provided to adjacent properties.

Council therefore:

(1) Designates as Major Commercial the areas so shown on Schedule "B" to be primarily used for retail commercial uses, shopping centres up to 23,225 square metres of gross leasable area, highway commercial uses, and limited office uses.

(2) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws and site plans, or amendments to one or more of them, shall ensure:
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.4.4(2) IN PART]

i) the adequacy of regional roads, public transit, water and sewer services for the proposed use and density;

ii) access to major roads servicing the area is compatible with their function to carry large volumes of traffic;

iii) compatibility of the proposed use with adjacent land uses;

iv) where office buildings are a proposed or permissable use, the scale of the office development proposed or permitted shall be in accordance with the principle that office buildings shall be a secondary and minor use in major commercial areas;

v) the adequacy of parking, access to public roads, traffic lanes, and landscaping proposed to be provided, as it relates to those transportation and servicing matters which are under regional jurisdiction.
[OMB ORDER, NO. 11, 11 OCTOBER, 1979, SECTION 2.5.4.4.4(2) (v) IN PART]

2.5.4.4.5 District Centre

District centres are intended to be major foci for surrounding residential districts. It is intended that they will include major office uses, retail commercial uses, high density residential uses, and the provision of business, personal, and community services. The development of district centres will partly ensure that the distribution of employment desired by this plan is attained.

Because the density of activities in district centres is expected to be substantial, their location and the timing of their development should be in association with the development of the rapid transit system. Having regard to the likely future transit routes, five district centres are designated within the greenbelt. The designation of additional district centres will be considered in terms of their desirability to achieve the employment distribution stated in this plan, and the extent to which they would increase the use and effectiveness of the public transport system. Preferred locations would be adjacent to a major road, to provide adequate automobile access, and within walking distance of a planned station on the rapid transit system, to ensure that large numbers of people have the opportunity to use the system. Compatibility with adjacent land uses will be established in relation to the scale and density of the project compared to surrounding land uses and traffic circulation patterns in the area.
[OMB ORDER, NO. 14, 11 OCTOBER, 1979, SECTION 2.5.4.4.5 IN PART]
[OMB ORDER, 29 OCTOBER, 1981, SECTION 2.5.4.4.5 IN PART]

Therefore Council:

(1) Designates as District Centre the locations shown on Schedule "B" to be primarily used for office, retail commercial, high density residential, and institutional uses. Retail commercial uses shall be on the scale of a community shopping centre (9,290 - 23,225 square metres of gross leasable area) except in the urban communities outside the greenbelt this limit may be exceeded.
[OMB ORDER, NO. 15, 11 OCTOBER, 1979, SECTION 2.5.4.4.5(1) IN PART]

(2) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, shall ensure:
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.4.5(2) IN PART]

i) the adequacy of regional roads, public transport, water sewer services for the proposed use and density,

ii) the adequacy of parking, access to public roads, traffic lanes, and landscaping proposed to be provided, as it relates to those transportation and servicing matters which are under regional jurisdiction,
[OMB ORDER NO. 11, 11 OCTOBER, 1979, SECTION 2.5.4.4.5(2) (ii) IN PART]

iii) compatibility of the proposed use with adjacent land use.

2.5.4.4.6 Commercial Facilities in Rural Areas

Outside the main urban area, it is expected that the amount of new commercial floor space will be relatively small, although it may appear to be a dominant feature in a rural environment. As such Council believes their location should be a matter of local planning for the area municipality to decide. However, Council believes commercial facilities should not locate at random, but should form part of a group of commercial uses. Council also believes commercial facilities should be encouraged to locate in communities rather than along major highways outside such communities.

Therefore Council proposes that:

(1) Commercial uses be permitted in those rural areas designated agricultural resource, marginal resource or village on Schedule "A" of this plan subject to the waste water discharge policy in Section 5.6.4 and with the concurrence of the area municipality.

(2) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, Council shall ensure:
[OPA #30, 16 MARCH, 1983, SECTION 2.5.4.4.6(2) IN PART]

i) the adequacy of regional roads, water and sewer services for the proposed use and density;

ii) the adequacy of parking, access to public roads, traffic lanes, and landscaping proposed to be provided, as it relates to those transportation and servicing matters which are under regional jurisdiction;
[OMB ORDER, NO. 11, 11 OCTOBER, 1979, SECTION 2.5.4.4.6(2) (ii) IN PART]

iii) compatibility of the proposed use with adjacent land uses.

2.5.4.4.7 **Recreation-Commercial Areas**

Certain lands in the Region adjacent to the Ottawa and Rideau Rivers are of particular importance because of their potential for recreational uses and their scenic attractions. Regional Council is of the opinion that such lands provide opportunities for commercial development which would have the following objectives:

i) preserve and enhance the scenic attractiveness of the area;

ii) complement the recreation potential of the waterfront;

iii) safeguard any adjacent natural environment areas;

iv) facilitate public access to the waterfront.

Permitted uses in "Recreation-Commercial Area" would include hotels, motels, restaurants, active and passive recreational facilities and limited ancillary uses directly relating to the needs of the users of the recreational facilities. It is not the intention of Council to permit shopping centres of any size or any retail facilities which are not incidental to the recreational uses to be located in lands designated as "Recreation-Commercial Areas".

Council therefore:

(1) Designates as "Recreational-Commercial Areas" the areas shown on Schedule "B" to be primarily used for development of a recreation-commercial nature. Examples of such use would include golf course, hotels, motels, restaurants, active and passive recreation facilities. Limited ancillary uses directly relating to the needs of the users of the recreational facilities are also permitted.

(2) When approving or considering local official plans, plans of subdivision, severances, restricted area by-laws and site plans, or amendments to one or more of them, shall ensure:

i) the adequacy of regional roads, public transit, water and sewer services for the proposed use and density;

ii) the adequacy of parking, access to public roads, traffic lanes and landscaping proposed to be provided, as it relates to those transportation and servicing matters which are under regional jurisdiction, and

iii) compatibility of the proposed use to adjacent land uses.
[OPA #17, 2 FEBRUARY, 1981, SECTION 2.5.4.4 ALL]

2.5.4.5 **Other Extensive Use Areas**

The National Capital Region of which the planning area is a part is probably unique in Canada in having large areas of land in public ownership both within and around the existing urban area. Much of this land is currently undeveloped and where it has been turned over to urban uses these have generally a low intensity, such as pollution control centres, garbage disposal sites and defence establishments. These land holdings give the urban area an openness which some other cities do not have. It is desirable that this continues.

The policy for these areas is intended to permit owners of the land (generally public agencies) a certain flexibility as to what they may do with the land without reference to Council, yet it provides Council with a framework within which it can review proposals which may be made from time to time. The policy is based on the following principles:

- That land in public ownership, having been acquired primarily for the purpose of providing greenspace within and around the urban area, should continue to be used in this way. However, this should not be construed that these will be developed as parks or recreation areas;

- The location of new major employment centres in places other than those contemplated by this plan could undermine the most important objectives of this plan, namely to build up employment outside the central area, to provide activity centres associated with employment in suburban areas and the major communities outside the greenbelt, and to provide support for the public transportation system, particularly rapid transit. Council is therefore concerned that areas designated "Other Extensive Uses" only be used for the creation of new major employment centres if approved by Council,

- Council being responsible for public transport and the majority of primary roads in the planning area, is concerned that uses which have substantial transportation needs be located in areas designated Other Extensive Uses only following careful consideration of their transportation needs in relation to the whole regional community. Examples are zoos or major sports stadia,

- Where a proposal to urbanize land designated "Other Extensive Uses" is made it should be replaced elsewhere as publicly owned open land close to the urban area, so that the total amount of land devoted to "Other Extensive Uses" does not diminish.

In summary therefore Council:

(1) Designates the area shown on Schedule "A" and "B" as Other Extensive Uses to be used in a similar manner as used on the date of the approval of this plan. Changes of use which

retain the general low density character and openness of the area including pits and quarries, underground mining, and wayside pits and quarries may be permitted without amendment to this plan but, major employment centres shall not be located in these areas without amendment to this plan. The location of any use which in the opinion of Council has the potential of being a large generator of traffic should not be established in areas designated "Other Extensive Uses" without amendment to this plan.
[OPA #31, 27 DECEMBER 1984, SECTION 2.5.4.5(1) IN PART]

(2) Will encourage the replacement of lands designated other extensive uses should they be developed for urban purposes subsequent to the approval of this plan.

(3) Intends that once a pit, quarry, underground mine, wayside pits or wayside quarry has been exhausted and the licence has been surrendered, uses will be permitted in accordance with policy (1) except that local official plans may provide that space created by underground mining may be used for additional uses subject, among any other requirements, to the satisfaction of any Regional concerns relating to waste disposal and to the provision of water, sewer, roads and public transport.
[OPA #31, 27 DECEMBER 1984, SECTION 2.5.4.5(3) ALL]

PART 3

3.0 TRANSPORTATION AND UTILITIES

3.1 TRANSPORTATION

3.1.1 PERSPECTIVES

3.1.1.1 Goals and Objectives

As stated in Part 1 of this plan, the major goal for transportation in the planning area is to develop a safe, convenient, efficient, and publicly oriented transportation system which optimizes accessibility for all persons and goods with minimum disruption to the environment. This goal expresses the general direction in which development of regional transportation services and associated strategies will proceed. It contains many internal conflicts. Specifically, there are often direct conflicts between the need for safety and convenience and the desire to minimize disruption to the environment. Even the sub-goals listed in Table 1-1 contain these same conflicts. The satisfaction of the transportation goals needs many trade-offs between conflicting objectives. Further, these trade-offs are influenced by values which change with time so that optimum solutions also change over time. As a consequence, the goals for transportation guide the development of the transportation system rather than dictate a single solution.

3.1.1.2 Trends and Implications

Given the possible need to accommodate a population of one million persons in the planning area, the resultant travel has also to be accommodated in accordance with the identified goals for transportation.

Travel in the planning area is expanding more rapidly than either population or employment. For example, during the period from 1963 to 1972 population in the planning area increased approximately 25% but travel rose by more than 50%. During this time, automobile ownership increased from 0.24 to 0.34 cars per capita, an increase of 45%. In this same period, transit ridership increased by less than 10%, which is less than half the rate of growth of population in the planning area. If these trends were to continue, then by the end of the planning period, public transit would carry just 5% of the total daily travel.

These trends are clearly incompatible with this plan's goal of developing a publicly oriented transportation system. It is also incompatible with other goals: "to minimize exposure to adverse environmental influences, ... to minimize disruption to established communities, ... to control all forms of environmental pollution, and ... to develop the Region at a minimum cost with maximum social benefits in accordance with its financial capability to meet identified needs."

These basic incompatibilities are well recognized and are among the reasons why "non-transportation" solutions, such as staggered hours, car-pooling and elimination of free parking, are being pursued in solving certain transportation problems. These are important and beneficial but they are incomplete in that they avoid two central issues. First, although these measures reduce the problems of peak travel on both roads and public transit, they do not necessarily increase transit ridership.* And second, they do not consider the problem of limited energy supplies. Although it is anticipated that Canada will be one of the few oil-rich industrial nations until the turn of the century and that, as a result, Canadians may not be forced to use public transportation as much as citizens of many other countries, the fact remains that oil supplies are limited and man's capacity to consume them appears unlimited. Consequently, since Canada is unlikely to bear the brunt of the energy crisis in relation to other industrialized countries, it is questionable whether shortages of oil will be so great as to force large numbers of people to use public transportation or whether the greater shortages in other countries will spur the development of alternative energy sources for the private automobile. Since neither of these alternatives will increase public transit ridership substantially, it is imperative that public transit be established in its own right as a viable and attractive form of urban transportation. Otherwise, the trends towards private transportation will continue and the automobile will dominate urban transportation.

3.1.1.3 **Transportation and Regional Development**

Transportation facilities, either roadways or public transit, are a major component of any regional development plan. They can be used consciously to stimulate or slow development in selected areas. But equally, travel generated by development in one location may be far more difficult to accommodate than that generated by the same development in another location and may thereby create major problems by necessitating the construction of new, major transportation facilities through existing urbanized areas.

In structuring development proposals for the planning area, this plan attempts to satisfy many goals. In relation to transportation, it seeks to balance the supply and demand for transportation facilities in such a way as to minimize the need for urban freeways, and to avoid socially and environmentally disruptive proposals.

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* Staggered hours improve both the level of service offered by the transit system by reducing overcrowding and its economics by reducing the travel peaks. However, staggered hours also reduce congestion on the road network and thereby tend to increase automobile travel.

These concerns are reflected in the policy for employment in the central area where an excessive concentration would result in substantial disruptions to existing residential areas in the inner city. Similarly, transportation problems exist in the eastern corridor with the result that development is limited to 75,000 persons in the East Urban Community on the principle that new development should not be located where it will result in exceptionally costly and disruptive transportation problems.
[OMB ORDER, NO. 48, 11 OCTOBER, 1979, SECTION 3.1.1.3 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 3.1.1.3 IN PART]

These are two instances where considerations of transportation are dominant in regional development policy. In other cases, the provision of adequate transportation poses financial and other difficulties which have to be assessed against other more important goals. However, when difficulties are encountered in satisfying transportation requirements, they are physically, socially, and environmentally costly. For example, the cost of providing regional sewer and water services is generally one-tenth and sometimes only one-twentieth of the cost of providing transportation services. Another example is where attractive transportation solutions clash with other goals. This occurs with plans which emphasize rapid transit and high density development in the immediate vicinity of each station with little or no development in between. Such solutions increase public transit ridership but at the expense of reducing choice in housing styles and types, of reducing the general level of social well-being, of disrupting established areas through redevelopment, and of embarking on a difficult program to implement. On the other hand, rapid transit can be used to focus employment, population, and special activities so as to improve the overall urban structure in the planning area. Thus, when rapid transit planning is undertaken, it will be necessary to reconsider many of these inter-relationships between transportation and the urban structure.

3.1.1.4 Public Transit

The public transit system in the Region has improved in recent years because levels of service and subsidies have increased. The program of operational innovations such as bus lanes on arterial streets, route extensions, improved frequency, priority traffic signals and signing have produced a level of transit ridership which is one of the highest for an all-bus system in North America. However, measures of this nature will only make marginal improvements in operating speeds or efficiency particularly for long distance trips since speeds on arterial streets are limited to at best an average of 20 kph.

To meet the transportation objectives of this plan it will be necessary to increase per capita ridership to a level above that now being achieved by most of the successful public transit systems in North America. Therefore to ensure that the trend of increasing per capita ridership is continued at a cost that the

community can afford, the early implementation of a rapid transit system which will offer a level of service which is superior to the existing system is required. Such a system will be able to compete directly with the private automobile especially for long trips.

On the basis of current technology, costs, funding capability and the presence of right-of-way now in public ownership, the most cost-effective strategy for the development of rapid transit in the region before the population level reaches 750,000 is the construction of "transitways".

The transitways will be a system of separate rights-of way for rapid transit in the corridors leading to the central area, with priority for transit operations on surface streets through the central area. A subsequent stage in the development of rapid transit could include an underground section through the central area.

The examination of both intermediate capacity and high capacity rapid transit technologies leads to the conclusion that either buses (which may be articulated or trolley) or Light Rail Transit (LRT) are the most appropriate technologies for operation on the transitways.

Buses will always remain a vital component of public transit in the planning area. Before any fixed route system of rapid transit is operational, buses will be the only form of public transit and improvements in service will require a continuing program of operational innovations such as bus lanes and bus priority traffic signals.
[OPA #7, OCTOBER 6, 1980 SECTION 3.1.1.4 ALL]

3.1.2 ACCOMMODATION OF TRAVEL

3.1.2.1 Travel Needs

The travel needs of the residents of the planning area will evolve continuously as opportunities and reasons for travel change. As a consequence, a forecast of travel needs is never precise but a best estimate which must be reviewed at regular intervals in order to determine its continuing validity. However, such a forecast is necessary to this plan to determine future needs for public transport, roadways, and associated facilities and, more particularly, to reserve in advance of need those lands which may be required for such facilities in the future. Without such advance planning, convenience and safety will be reduced and disruption to the community greater.

In assessing travel needs for this plan, it is necessary to consider travel for a study area which includes both the Regional Municipality of Ottawa-Carleton and the Outaouais Regional Community.

On an average weekday in 1971, there were 1.2 million person trips made in this study area. This is expected to increase to 3.2 million.
[OPA #30, 16 MARCH, 1983, SECTION 3.1.2.1 IN PART]

This increase is primarily related to the projected growth in population and employment although some small increases do result from other anticipated changes in travel compostition. These trips are made throughout the day for many purposes and consist of the movement of persons and goods between locations such as residential areas, employment areas, industrial complexes, and special activity centres. These movements are summarized in Table 3-1 by type and provide the basis for the policies and schedules of this plan. The types of trip purposes are classified according to their origin and destination as follows:

- Home Based Work - trip home to work or work to home.
- Home Based School - trip from home to school or school to home.
- Home Based Business - trip from home to bank, dentist, etc., and back to home.
- Home Based Pleasure and Others - trip from home to movie, friends house, etc., and back to home.
- Non-Home Based - trip from work to restaurant, restaurant to bank, etc. (neither end of the trip at home).
- Internal - trips which have both an origin and a destination within the study area.
- External - trips which have either the origin or destination, but not both, within the study area, and trips having neither origin nor destination in the study area (through trips).

Table 3-1
Travel Forecasts

Trip Type	Average Weekday 24-hour (100%)		Peak Hour[a] (12% of 24 hour)		Highest Off-Peak Hour[b] (8% of 24 hr)	
	Person trips[c]	Percent of total	Person trips	Percent of total	Person trips	Percent of Total
Home Based Work	1,184,000	33	251,000	56	28,000	10
Home Based School	224,000	6	13,000	3	4,000	1
Home Based Business	516,000	14	45,000	11	52,000	19
Home Based Pleasure and Others	765,000	21	49,000	11	130,000	48
Non-Home Based	655,000	18	54,000	12	37,000	14
Total Internal	3,344,000	92	412,000	93	251,000	92
External	276,000	8	33,000	7	21,000	8
Total	3,620,000	100%	445,000	100%	272,000	100%

[a] The highest hourly trip volume of the day which occurs normally during either the morning or aftrnoon peak travel periods of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., depending on location.

[b] The highest hourly trip volume occuring outside the peak travel periods of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

[c] A person trip is a trip made by one person between an origin and a destination, e.g. home to work, work to shopping, etc. A trip from work to home which is interrupted by a stop at a store to pick up goods is two person trips: work to shop and shop to home.

The type and location of transportation facilities needed to accommodate this travel demand depends on the spatial distribution of each type of movement. For example, public transit can accommodate work trips better than it can other trip types. This is because:

- Work trips are made to employment areas which are relatively more concentrated in location than other activities such as shopping and personal service;
- Work trips are made on a more routine and regular basis than other trips;
- Work trips involve long turnover time, i.e. the elapsed time between arrival at work and departure from work which requires long parking time if the trip is made by automobile.

On the other hand, non-work trips are made to more dispersed destinations, are made less frequently and less regularly than work trips, sometimes involve carrying of packages and parcels, and require shorter turnover time and thus less parking cost. For these reasons it is difficult to divert substantial numbers of non-work trips to public transit.

This means that both public transit and roadway facilities are necessary to accommodate different types of travel and that as population and employment increase in the planning area, so will the need for additional public transit and road facilities. This plan identifies and locates the facilities needed to accommodate the different types of travel within the general framework established by the goals and objectives.

Transit travel can be increased provided the right systems and services are implemented, provided complementary land use policies are implemented, and provided attitudes of the public towards public transportation are changed fundamentally. The full effect of these changes cannot be estimated in advance. Instead, future guidelines for transit usage have been accepted for critical locations as the basis for providing future transportation facilities in this plan. These guidelines are shown in Map 5 for the afternoon peak hour in which they are compared to the 1971 level of transit usage. Although these guidelines are not goals, best estimates or upper limits of future transit usage, they do imply a very high level of transit usage. An example is the journey to work in the central area where 80% of all employees must use public transit between home and work if the guidelines in Map 5 are to be attained.

3.1.2.2 **Central Area**

Transportation problems are most severe in the central area and inner city districts. This is due in part to the very substantial number of trips going to and from these areas but also to the number of trips which are forced to pass through the areas. This latter group of trips, which worsens the level of congestion and further disrupts the inner city communities, is due primarily to the concentration of Ottawa River crossings in the central area and to the lack of alternate routes.

Travel to and from central area depends primarily on the amount of employment located there. Although the proporation of central area employment in the total planning area will have to fall from the existing level of 34% to about 22%, this will still result in employment in the central area increasing from the 1971 level of 68,000 to about 100,000. If the greater central areas of Ottawa and Hull are included, the level of employment would increase from a 1971 level of 107,000 to about 198,000 employees (147,000 in Ottawa; 61,000 in Hull), an increase of 85%. The resultant travel needs into and through the greater central area resulting from this level of employment are very substantial in terms of added public transit and road facilities. It is the magnitude of these needs which becomes the dominant factor in establishing the desirable size of the central area. The transportation consequences of exceeding the proposed

level appear costly, disruptive, and questionable in terms of any benefit-cost analysis.

It is therefore the opinion of Council that the level of employment in the central area must be consistent with the objectives of attaining a level of public transit usage consistent with the guidelines enumerated and with the provision of road facilities identified in Schedules "C" and "D". To do otherwise, would have a substantial disruptive effect on existing residential communities in the inner city area.

3.1.2.3 **Rapid Transit**

Increased use of public transit is essential if massive road improvements are to be avoided. The most important step in this direction is to implement a system of rapid transit as the basis for improved public transit service throughout the urban parts of the planning area.

The overall configuration of primary road and rapid transit corridors, rather than their individual alignments, determines the transit system's overall effectiveness. For rapid transit, the criteria against which the performance of the proposed system must be assessed and optimized are:

- all elements of the system should be physically, socially, environmentally, aesthetically, and economically feasible;
- in order to realize the economies and benefits of mass transit, there should be a limited number of rapid transit routes;
- the system must satisfy travel demand and capacity deficiency, especially since other criteria simply act as "opportunities" or "restraints" on how well this basic criteria is satisified;
- to satisfy this plan's goals the system should be oriented towards serving the central area adequately from all possible directions and towards the proposed urban communities;
- the system should serve as many activity centres as possible;
- the system should be operationally feasible under various modes of operation;
- this plan's goals require a very high level of service which in turn necessitates short travel times between transit stations and actual origins and destinations and direct, non-circuitous routes between stations and termini;
- the system should complement all other forms of transportation, including both public and private, in such a way that all components can function in an integrated manner;

- the system should form an integrated system in such a way as to provide an area-wide function;
- the system should be capable of being constructed in stages on a priority basis;
- the system should provide for future expansion in terms of expansion of service and operating capacity;
- the system should use readily available rights-of-way wherever possible so as to minimize costs and disruption; however, this criterion should not override the need to maximize level of service and ridership.

Based on these criteria and on consideration of travel demand in the planning area and across the Ottawa River, the rapid transit routes shown on Schedule "E" are recommended as the basis for detailed design for the south-east, west, south-west and east corridors and the central area. The corridor shown on Schedule "E" is recommended as a framework for establishing and evaluating alternate rapid transit routes in the north (interprovincial) corridor. The rapid transit system is expected to be extended to serve the new urban communities beyond the greenbelt in the future.
[OPA #19, 14 OCTOBER, 1981, SECTION 3.1.2.3. IN PART]

3.1.2.4 **Roads**

As noted above, public transit can only serve part of the area's travel needs and additional roads must be provided. To accord with the goals of this plan, new urban freeways should be avoided wherever possible. Arterial roads must therefore be the basis for meeting road needs of the planning area. However, there are limitations to this policy and a few new high capacity facilities are needed where existing arterial roads and rights-of-way are insufficient or non-existent. These improvements must be planned within the context of the overall configuration of the major road system since it is the latter, rather than the individual alignments, which determine the system's overall effectiveness in meeting travel needs. For primary roads, the criteria against which the performance of the proposed system configuration must be assessed and optimized are:

- new and improved elements of the system should be physically, socially, environmentally, aesthetically, and economically feasible;
- the system should carry most movements on the minimum number of new or improved facilities;
- the system should make proper use of existing facilities so as to minimize the need for additional roads;
- the system should serve the proposed growth structure and other elements in this plan;

- the system should provide sufficient capacity to meet the forecast travel demand and where possible accommodate that traffic which can be diverted away from the central and other built-up areas;

- the system should serve major activity centres;

- both the system as a whole and its elements should be operationally feasible;

- new elements should complement existing or committed elements and so form an integrated system providing an area-wide function;

- the system should utilize readily available rights-of-way wherever possible so as to minimize cost and disruption;

- the system should allow trips to be made on the most practical and direct route between their origins and destinations;

- the system should maximize safety by minimizing points of conflict and by providing for the separation of longer distance and through trips from shorter distance and local trips;

- the system should be capable of being constructed in stages on a priority basis;

- the system should be capable of expansion.

Analysis of forecast capacity deficiencies indicates the need for high capacity crossings of the Ottawa River in the vicinity of Deschênes Rapids in the west and Kettle Island in the east, and of the Rideau River south of Heron Road. The concept of these crossings interconnected by high capacity facilities is shown in Map 7. These locations, together with consideration of the criteria listed above, indicate that the "Box System" shown in Map 7 is the most effective new element of the primary road system shown in Schedules "C" and "D" to meet the road travel needs of the planning area. The supporting roads in these schedules provide a continuous system of primary roads throughout the planning area sufficient to accommodate the anticipated road travel needs, subject to the limitations expressed in section 3.1.2.6.

3.1.2.5 **External Travel**

External travel is not a major problem in the planning area. Even anticipating a very considerable growth in external travel, a growth which may not fully occur as a result of continuing energy shortages and rising prices, only 7-8% of forecast daily trips are expected to have either their origin or destination outside the study area and only 1% to be through trips with both origin and destination outside the study area. Further, the greater part of this external travel is oriented directly towards the urban area inside the greenbelt and can make only limited use of any bypass facility. But travel between the urban communities, when added to this external travel, is sufficient to warrant an outer ring freeway between Highway 417 East and Highway 417 West by the end of the planning period. This road would become the Trans-Canada Highway and be the logical termination of Highway 416 as a provincial freeway.

Another means of handling some external travel is commuter rail. Unfortunately, there are three obstacles to this solution in the planning area. First, commuter rail lines have been removed from the central area of Ottawa so that they must either be re-introduced or a substitute means of connecting Ottawa Station to the central area implemented. The latter is a disadvantage since the transfer imposes a time and level of service penalty on all potential commuter rail systems in the planning area. This in turn reduces its attractiveness to the user and hence erodes its viability. The second major problem is the low level of travel demand orginating outside the planning area for such services.* And third, a considerable capital investment would be required to upgrade the tracks and signal systems to the level required to operate a reasonable passenger service. These three factors together constitute a persuasive case against commuter rail and for a cheaper and more flexible solution such as commuter buses. These can be increased in number as demand increases. If sufficient travel demand is evidenced to warrant the capital investments needed for commuter rail service, this can be introduced.

3.1.2.6 Limitations of Proposals

Although this plan contains proposals for transportation in the planning area which are in accord with the plan's goals for a publicly oriented transportation system, they do not accommodate all the increased travel requirements anticipated by the end of the planning period. The purpose of these proposals is to provide the basis for protecting property in identified corridors and to provide the framework for the planning and design of transportation improvements required by approximately 1995. During this time, appropriate transportation strategies and plans must be developed for the period beyond this date.

As population in the planning area approaches 800,000 to 900,000 persons, this plan's strategy respecting public transportation and arterial roads will become progressively incapable of satisfying all travel needs in the planning area. As further development in the planning area occurs and the population approaches one million, the transportation facilities proposed in this plan will require further improvement and addition if travel needs are to be satisfied. If these are not provided, then major changes will occur in the patterns of working, living and schooling. The increased congestion will contribute to a general decline in the urban environment. But these and a host of similar changes are reactions to insufficient capacity and to the resultant heavy congestion on the major roads and public transportation facilities. The primary cause of this congestion is continuing development in the planning area, and it is evident that, within the next few years, decisions will be made, either consciously or by default, that will

* Initial estimates forecast the number of peak hour person trips by the end of the planning period from Arnprior, Carleton Place and Kemptville to the central area of Ottawa and Hull is 50, 100 and 150 respectively.

determine how the planning area will grow beyond 800,000 to 900,000 persons. If growth is continued beyond this point in accordance with this plan, then either new major transportation facilities, with many of the characteristics of urban freeways, will have to be constructed within the existing urban area, or residents must be prepared to accept progressively worsening levels of congestion and qualities of urban environment.

These concerns are important because the desire to travel results from the need to engage in social and economic activities, and reflects the way people have chosen or are expected to choose to live and organize their environment. Therefore, satisfaction of social and economic activities is dependent on the satisfaction of the resultant travel demand. Conversely, if travel demand is not properly satisfied, the consequence will be to limit the type and extent of activity.

3.1.2.7 **Administration and Coordination**

Satisfaction of travel needs requires the adequate provision of various types of facilities which accommodate the movements of persons and goods as well as facilities which accommodate transfers or terminations of these movements. For an effective transportation system, all these facilities must be provided in relation to the type and magnitude of the demand for movement in such a way that they operate together efficiently in a coordinated manner. Since these facilities are, and will continue to be, provided by many different governments and agencies in and adjacent to this planning area, it is important that Council takes all steps within its power to coordinate the planning, implementation, and operation of the entire transportation system in the planning area.

3.1.2.8 **Council's Intentions**

In summary, Council:

(1) Shall satisfy the different travel needs by providing public transit and road facilities which recognize safety, flexibility, economcs, and socio-environmental impacts;

(2) Shall permit development in an area insofar as it can be reasonably served by the current or proposed transportation system, subject to necessary staging requirements. In so doing, Council recognizes that the type and intensity of activity in the planning area is dependent on, and may be constrained by, the extent to which the movement of people and goods can be accommodated on the total transportation system of roads, public transit and terminal facilities;

(3) Shall undertake a program to increase the use of public transit throughout the planning area, recognizing the guidelines of future transit usage in Map 5 as the basis on which future transportation decisions will be made;

(4) Shall provide transportation to the central area sufficient for the needs of approximately 100,000 employees in that area. In so doing, Council recognizes that to exceed this level of employment will have a disruptive effect on existing residential communities in the inner city and will not be in accord with the goals of this plan;

(5) Adopts the rapid transit routes as shown in Schedule "E" as a basis for detailed design and implementation and recommends the corridor shown in Schedule "E" as a framework for establishing and evaluating alternate rapid transit routes in the north (interprovincial) corridor.
[OPA #19, 14 OCTOBER, 1981, section 3.1.2.8. (5) ALL]

(6) Adopts the primary road network in Schedules "C" and "D" as the framework for further planning and design. In so doing, Council recognizes that roads will continue to play an important role in satisfying travel needs in the planning area;

(7) Shall co-ordinate the planning, implementation and operation of all transportation services under its jurisdiction in order to maximize the compatibility and efficiency of transportation services in the planning area;

(8) Shall co-ordinate the transportation services under its jurisdiction with those transportation services within the planning area but not under its jurisdiction in order to ensure their overall compatibility and efficiency;

(9) Shall maintain and improve liaison with all governments and agencies providing transportation services outside the planning area but affecting transportation services within the planning area with the objective of ensuring compatibility and efficiency of the overall transportation system.

3.1.3. PUBLIC TRANSIT

3.1.3.1. Role of Public Transit

Excellent public transit is fundamental to satisfying the goal of a publicly oriented transportation system. It is also fundamental to the plan as a whole in that, without it, it is not possible to satisfy travel needs without massive improvements to the road system. Since such improvements are not reasonable, the urban development contemplated cannot be served without effective public transportation. The resultant congestion would tend to inhibit growth in existing residential areas, employment and major activity centres and encourage new development in less congested areas. Such a pattern of development has been rejected as the basis for this plan.

Consequently, the structure of development both inside the greenbelt and within the urban communities is premised on a high level of public transit service throughout the urban portions of the planning area.

Public transit can take many forms within its basic definition as any form of intra-urban transportation for which a fare is normally paid. It includes rapid transit which is defined as public transit on its own right-of-way and therefore includes busways; it also includes conventional bus service, improved bus service such as express buses running on exclusive bus lanes, and various types of feeder-distributor services such as dial-a-bus.

Public transit, compared to other modes of travel, is more efficient when all costs, including social costs, are considered. Moreover, if properly designated, public transit is less disruptive, less polluting, more economical in the use of limited resources, and can provide an essential service to a segment of the planning area's population that would otherwise be limited in its mobility. All these factors contribute to the conclusion that public transit has a vital role in the planning area and that implementation of an effective public transit system is an essential step in reducing the need for additional road facilities. [OPA #7, OCTOBER 6, 1980, SECTION 3.1.3.1. IN PART]

3.1.3.2 **Rapid Transit**

As the population in the Region increases, it will be increasingly necessary to develop separate rights-of-way for public transit vehicles. Roads will become more congested, especially during peak periods of travel and therefore shared facilities will provide a low level of transit service and will not provide the necessary capacity on the transit system.

Improvements in transit service such as bus lanes on arterial streets, route extensions and improved frequency have produced a high level of transit ridership in the region. However, measures of this nature will only make marginal improvements in operating speed or efficiency, particularly for longer distance trips.

Reserved bus lanes on expressways or parkways can achieve a high-speed operation. However, many of the roads on which these services might be established are very heavily used by other traffic and their pre-emption for public transit use is not practicable. Also, buses suffer from traffic conflicts at intersections and in the central area. These conflicts affect operating speeds and schedule reliability.

One of the objectives of separate rights-of-way is to improve the level of service. This should improve transit ridership and as a result the future level of public subsidy necessary to offset operating deficits will be reduced. If separate rights-of-way are not developed, the transit system would continue to operate on congested roads with consequent lower operating speeds, levels of service and significantly higher operating costs.

The Region is carrying out a rapid transit development program. The objective of this program is to identify the alignments and a staging plan for transitways in the Region. The principal conclusions resulting from studies carried out as part of the rapid transit development program are:

- Significant increases in the current levels of transit usage will be necessary in all corridors if major road construction is to be delayed.

- To accommodate these transit passenger volumes by the 625,000 population level, a minimum transitway construction program will require facilities in the west corridor to Woodroffe Avenue, in the southwest to Baseline Road, in the southeast to a point south of Walkley Road and in the east to Blair Road.

- By the 750,000 population level this minimum system will have to be extended in the west to Acres Road, in the south-west to the CNR line and in the east to Green Creek, approximately.

- By the time the Region reaches a population of 1,000,000 rapid transit service will be required in all five corridors, with their outer limits being determined by policies with respect to the development of the new urban communities beyond the Greenbelt.

Having regard to the environmental factors, transportation service factors and cost evaluation factors, Council is of the opinion that the most favourable rapid transit routes for the central area, south-east, west, and south-west and east corridors are those identified on Schedule 'E'. It is to be noted that at some point in the future, it may be necessary to relocate the rapid transit route from the Ottawa River Parkway. At such time, the Richmond alignment and other options will be considered as an alternative to the Ottawa River Parkway section of the rapid transit system. It is further noted that in selecting the routes, Council is of the opinion that the routes shown in Schedule 'E' are initially for bus technology.
[OPA #19, 14 OCTOBER, 1981, SECTION 3.1.3.2. IN PART]

During the functional design stage of the transitways, Council shall include measures to mitigate any environmental impact of adjacent land uses. Such measures may include landscaping, installation of noise barriers, screening, depressing the transitway, covering the transitway, and integration of street and transitway network. In particular, Council intends to consider depressing the transitway below grade as much as possible between Smyth Road and Bank Street in the Southeast Corridor. In the West/Southwest Corridor Council will consider covering the transitway between Scott Street and the Western Parkway if the Richmond alignment route is constructed.
[OPA #7, OCTOBER 6, 1980, SECTION 3.1.3.2 ALL]

In the central area, the rapid transit route will consist of a bus mall on Albert Street, two bus-only lanes on the north side of the MacKenzie King Bridge, a bus mall on Waller Street between the MacKenzie King Bridge and Nicholas Street, and a transitway on the east side of Nicholas Street between Waller Street and the Queensway. This route is shown on Schedule 'E' as 'Transit Vehicles on Existing Roads' (being the bus

mall on Albert Street and Waller Street, and bus-only lanes on the Mackenzie King Bridge) and 'Transitway'. [OPA #38, 1 MARCH, 1983, SECTION 3.1.3.2 IN PART]

3.1.3.3 **Other Forms of Public Transit**

Although rapid transit is the most important component of public transit, its success depends on the existence of fast, convenient, efficient and integrated feeder and complementary services. Some of these services will be directly oriented towards rapid transit stations while others will be needed to accommodate those trips not served by any portion of the rapid transit system.

Both these categories of service are extremely flexible in their routing, orientation and mode of operation and as such they are not appropriate for definition in this plan. However, both require a continuous system of major roadways in order that fast,direct, and continuous transit service can be provided to the riders. They also require special consideration at intersections, on particular roads, and for access to activity centres such as shopping centres and major transit terminals.

3.1.3.4 **Council's Intentions**

In summary, Council:

(1) will give precedence to public transit and/or commuter service over all forms of road construction or road widenings,
[OPA #7, OCTOBER 6, 1980, SECTION 3.1.3.4 (1) IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 3.1.3.4(1) IN PART]

(2) will implement the rapid transit system in accordance with Schedule 'E' of the plan.
[OPA #7, OCTOBER 6, 1980, SECTION 3.1.3.4(2) ALL]

(3) when approving or considering local official plans, secondary plans, development plans, plans of subdivision, plans of condominium and severances for development within areas designated principal urban area on Schedule A or amendments to one or more of them, shall ensure adequate provision for the efficient delivery of transit service to within approximately 400 metres of virtually all residential uses and within approximately 400 metres of all commercial, industrial and institutional uses.
[OPA #34, 9 MAY, 1983, SECTION 3.1.3.4(3) ALL]

3.1.4 **ROADS**

3.1.4.1 **Network Development**

The major trip purpose components of travel and the modes best suited to accommodate them are described in Section 3.1.2. For those trips not accommodated by public transit and therefore requiring the use of a private vehicle, roads are necessary. These are shown in Schedules "C" and "D" and termed "Primary Roads".

The term "primary" is used since all roads in Schedules "C" and "D" are shown without reference to jurisdiction, i.e. federal, provincial, regional, or local municipal; or to classification, i.e. freeway, parkway, arterial, collector, or local. All roads indicated as primary are or will be under federal, provincial, or regional jurisdiction, and fall mostly within the freeway, parkway, and arterial classifications.

Roads provide two basic functions: traffic service and land service. Traffic service generally relates to accommodating vehicles during the portion of their trips between termini for all trip purposes while land service relates to providing ingress and egress to abutting land uses.* Freeways are at the traffic service end of the spectrum while local streets are at the land service end. Table 3-2 provides a general description of each road classification.

*Parkways and driveways in the planning area are primarily recreation oriented but their functional characteristics as roads provide traffic service rather than land service.

TABLE 3-2

ROAD CLASSIFICATION AND GENERAL CHARACTERISTICS

Road Classification	Service Function	Operating Speed (km/h)	Intersections	Vehicle Type Restrictions	Control of Access	Example
Freeway	traffic	80 – 100 (urban) 100 – 110 (rural)	grade separated	no restrictions	full control	Queensway (urban) Highway 417 (rural)
Parkway	traffic	60 – 70	grade separated or at-grade	restricted to automobiles and buses	partial control	Ottawa River Parkway Western Parkway
Arterial	primary traffic secondary land	40 – 60 (urban) 60 – 80 (rural)	at-grade	no restrictions	partial control	Carling Avenue (urban) Fallowfield Road (rural)
Collector	equal traffic and land	40 – 60	at-grade	restricted to automobiles, buses and local commercial traffic	no control	Pleasant Park Road
Local	primary land secondary traffic	40 – 50	at-grade	restricted to automobiles, buses and local commercial traffic	no control	Broadway Avenue
Driveway	traffic	40 – 50	at-grade	restricted to automobiles and buses	partial control	Colonel By Drive

If traffic is to be accommodated safely, efficiently and conveniently, and if residential communities are to be protected from through traffic, all roads should form a coordinated system in which local roads connect to collector roads, collector roads to arterial roads, and arterial roads to freeways and parkways.. It is intended that the arterial road system, together with limited access facilities such as freeways and parkways, serve as the principal network for high volume traffic. It should assist in defining residential neighbourhoods as well as industrial complexes, commercial centres, and recreational areas. In this regard, it is important to locate major arterials in such a way as to serve contiguous land developments while minimizing conflicts with intra-area movements of pedestrians and vehicles. It is easy to follow these principles in newly developing areas but in existing urban areas it is often difficult to distinguish between arterial, collector and local streets. In these areas, it is intended that the primary road network act as the framework for the further definition of collector and local streets in local area studies.

This definition of function enables the public to know which facilities are likely to be improved and which will remain as local and collector roads. It is expected that this knowledge will improve neighbourhood stability and provide greater certainty for residents.

The primary road network in Schedules "C" and "D" is subdivided into two classifications, "major" and "minor" primary roads. Major roads are freeways, parkways, and most arterials; whereas minor roads are some arterials and all collectors under or likely to be under regional jurisdiction. In some instances the main road through an existing community can be classified as either a minor arterial or major collector. Typically, these roads provide through routes for large volumes of traffic but simultaneously provide the collector road function for local traffic. This results in a conflict of function, increased traffic hazards and deteriorating environment, and exemplifies the need for and value of a well defined primary road network.

Criteria for the overall configuration of the primary road network are listed in Section 3.1.2. Although these criteria are the basis for Schedules "C" and "D", they cannot be met fully in every link. This is most evident in existing areas where roads were often developed without reference to any overall system criteria. This results in several unfortunate but unavoidable conflicts between primary roads and established urban areas. However, if a primary road network is not developed, streets become major by "use" since the public chooses the most convenient route in satisfying their movement desires. In addition, inaction on the designation and upgrading of a primary road network has the result of traffic "filtering" through residential areas having an undesirable effect on the residential environment.

3.1.4.2 Network Description

The designation of primary roads in Schedules "C" and "D" is based principally on existing regional roads, provincial highways and federal parkways and driveways.

The network is intended as a framework for planning and design. Consequently, alignments of proposed new roads are approximate and will be the subject of detailed study closer to the time of implementation. Before construction of any transportation facility along a proposed route, every alternative will be investigated as a potential transportation solution. Where no readily available corridor exists but there is the need for a new road, the road is shown as a "conceptual link". Following further route evaluation and consideration of local issues, the designation in the plan will be amended to show the link as a primary road.

Right-of-way requirements for all existing and proposed regional roads are protected through Council by-law. The first Regional Road Right-of-Way Requirement Policy was adopted by Council on June 14th, 1971, and incorporates most of the roads in Schedules "C" and "D" under regional jurisdiction. This policy will be updated progressively as land use and right-of-way requirements are confirmed. These rights-of-way are protected by acquiring or reserving the necessary lands at the time of development or redevelopment of adjacent lands through conditions on subdivision, rezoning, and issuances of building permits. The purpose of acquiring land when it becomes available is to minimize property damage and disruption at the time of implementation. In general, rights-of-way for all major primary roads in Schedule "C" will be protected for a minimum of four lanes but some will be protected at six lanes. In Schedule "D", most regional roads, excepting those in or directly associated with the urban communities and the Outer Ring Road, are rural in nature and will be protected for two lanes only. The Outer Ring Road is proposed as a staged facility whereby existing road allowances are used for stage 1 with the ultimate stage a freeway on a new right-of-way.

Full development of all facilities in the primary road network is expected to be required when the population of the planning area reaches about 800,000 persons. As Council intends to implement rapid transit and to promote the use of public transit as an item of high priority, the phasing and scheduling of improvements to the public transit system will dictate priorities for many major road improvements in the planning area. More specifically, major road improvements will not be scheduled where they will compete directly with improvements to public transit. However, roads are not always improved simply to provide more capacity. Very often, the timing of a road improvement is controlled by such factors as the horizontal and vertical alignment (safety), the width and condition of the road surface, the structural condition of the roadbed, drainage and maintenance problems, or the need to coordinate with sewer and water construction. These factors are considered during the annual five-year capital budget forecast of the Regional Municipality.

In general, the movements of goods within and through the planning area will be accommodated on the primary road network. However, there are instances where the residential nature of certain minor primary roads override the need for the movement of trucks. Commercial vehicles are prohibited on parkways and driveways but there are some locations where access to inter-provincial bridges or to special activity areas is so important that consideration will need to be given to permitting truck traffic on short, specific links.

3.1.4.3 **Major Network Components**

The Ottawa Queensway is the only urban freeway designated in this plan. The rural freeways are Highway 417 East which enters the urban area through the greenbelt and connects to the Queensway between Blair and Cyrville Roads, Highway 417 West which is the extension of the Queensway west of Richmond Road, the Outer Ring Road which in its ultimate development is proposed as a rural freeway between Highway 417 East and Highway 417 West, and Highway 416 from the south which, with the designation of the Outer Ring Road as the Trans Canada Highway, would terminate as a provincial freeway at the Ring Road.*

Although the Ottawa Queensway is the only urban freeway designated in the plan, travel resulting from development of an urban community in the south part of Nepean and the south part of Gloucester will require a high capacity facility connecting the urban community to the outer and inner ring roads. This road could operate at a lower speed than an urban freeway; however, it will probably have to be grade-separated on account of physical constraints on its route and profile.
[OMB ORDER NO. 49, 11 OCTOBER, 1979, SECTION 3.1.4.3 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 3.1.4.3 IN PART]

Until urban development in Barrhaven, the south part of Nepean and the south part of Gloucester is developed beyond about 25,000 persons, a rapid transit facility will be sufficient within the corridor. However, at that time, a road facility will be needed in this corridor. As this corridor is partially owned by the Regional Municipality and partially controlled by the federal and provincial governments, Council intends to protect, where necessary, those portions within its jurisdiction.
[OPA #30, 16 MARCH, 1983, SECTION 3.1.4.3 IN PART]

Outside the greenbelt, the most important proposal is the Outer Ring Road. Most of the travel on this road will be generated between the urban communities that have more than 50,000 persons, have substantial local employment and are less than 10-13 kilometres apart. Since this condition will not be reached until towards the end of the planning period, it is important that the route be developed first as a continous arterial

*The characteristics of urban and rural freeways are outlined in Table 3-2.

road in order to accommodate external and through travel in the planning area as well as trips between urban communities. As travel increases and the above conditions are reached, the construction of a freeway will be warranted. A specific route is not shown for this freeway in Schedule "D". However, Council intends that the necessary right-of-way be identified by a route study to be undertaken at an early date, and reserved, and that implementation of the first stage arterial road be commenced.

The route for the Outer Ring freeway must be planned as an internal element of the new major urban communities outside the greenbelt. In this regard, as secondary planning for these urban communities take place, the freeway location must be given special consideration. The planning for the West and East Urban Communities will identify primary roadways within and associated with these areas. Schedule "D" indicates those primary roads on the periphery of the urban communities and following acceptance of the secondary plan, all other primary roads will be added to the schedule by amendment to this plan.
[OPA #30, 16 MARCH, 1983, SECTION 3.1.4.3 IN PART]

A major new component of the transportation network inside the greenbelt is the Parkway Ring (inner ring road) which fulfils part of the function identified previously in Section 3.1.2 for the Box System.

In the planning area, the Western, Southern and Eastern Parkways are used with a short section of Highway 417 East to interconnect the Deschenes and Kettle Island Bridges across the Ottawa River and the Parkway Bridge across the Rideau River south of Hog's Back. The Deschênes Bridge and its connection to the Westerly Parkway, the Kettle Island Bridge and its connection to the Ottawa River Parkway East, and Western Parkway are shown as conceptual links on Schedule "C". The remaining links are shown as either existing or "proposed major roads". Though not shown on Schedule "C", this ring road is envisaged as connecting to Autoroute 50 in the Outaouais Regional Community, thereby providing a continuous ring road interconnecting the urban area on both sides of the Ottawa River. Most of the land for this proposal is owned by the federal government and therefore their co-operation is needed in implementing this important link.
[OMB ORDER, NO. 50, 11 OCTOBER, 1979, SECTION 3.1.4.3 IN PART]

The Parkway Ring Road also functions as a bypass for the inner city area bounded by the Ottawa River, the CPR tracks and the Rideau River. This area experiences and will continue to experience considerable pressure from through travel until such time as the inner ring road is complete. At present, all interprovincial travel, except that on the Champlain Bridge and all east-west travel except that on the Heron Road and Hog's Back Bridges across the Rideau River, is made through this area. Construction of the Parkway Ring and the Deschênes and Kettle Island Bridges offers an alternative route for much of this travel and will thereby reduce some of the road pressures. More particularly with regard to east-west travel through the inner city area, the success of this Parkway Ring in acting as a bypass and the

success of public transit in meeting or exceeding the guidelines for transit usage will determine the need and priority for additional east-west roads through this area.

To complement the Parkway Ring and accommodate the movement of goods, it is proposed to realign and connect Knoxdale and Hunt Club Roads as shown on Schedule "C". This new route serves the new residential areas within the greenbelt as well as the industrial areas in Nepean, South Ottawa, and Gloucester, providing them with direct access to Highway 417 and Montreal.
[OPA #30, 16 MARCH, 1983, SECTION 3.1.4.3 IN PART]

The forecast increases in employment within the Ottawa central and greater central areas, together with the expansion of the Hull central area, result in a need for additional roads to serve both automobiles and surface transit in these areas. To accommodate these needs, the Queensway corridor through downtown needs to be upgraded to include an extended system of one-way streets on either side of the Queensway and a new crossing of both the Rideau Canal and Rideau River is required.

To satisfy future east-west travel demand, it will be necessary to connect Carling Avenue to Industrial Avenue. This connection is shown on Schedule "C" as a conceptual link and following detailed studies will be replaced by a proposed major road designation on this plan. During the studies, top priority will be given to locating this route adjacent to the Queensway.

From the west, Scott Street is connected to Richmond Road and upgraded through to Slater Street and Laurier Avenue. Due to the ongoing study of the Lebreton Flats area, Scott Street east of the CPR Ellwood Subdivision and the connection between Preston Street and the Chaudière Bridge north of Scott Street, are shown as conceptual links on Schedule "C". These links will be located and designed to minimize the disruptive effect on existing and proposed residential areas.
[OMB ORDER, NO. 51 AND 54, 11 OCTOBER, 1979, SECTION 3.1.4.3 IN PART]
[OPA #7 OCTOBER 6, 1980, SECTIONS 3.1.4.3 IN PART]
[OPA #21, 5 AUGUST, 1981, SECTION 3.1.4.3 IN PART]
[DELETED BY OPA #50, 29 JULY, 1985 SECTION 3.1.4.3 IN PART]

From the south, the Alta Vista Parkway is proposed in the corridor between Elmvale Acres and Urbandale Acres connecting to the Queensway at the existing Nicholas Street interchange. Northwards it is proposed that a continuous north-south arterial between the MacDonald-Cartier Bridge and the Alta Vista Parkway at the Queensway be developed along Nicholas-Waller Streets.
[OPA #7, OCTOBER 6, 1980, SECTION 3.1.4.3 IN PART]

[DELETED BY OPA #38, 1 MARCH, 1983, SECTIONS 3.1.4.3 IN PART]

To provide service for the north part of the City of Gloucester and the East Urban Community, Hemlock Road is extended east of St. Laurent Boulevard as a parkway. It will connect with the Kettle Island Bridge and Eastern Parkway and, once past Rockcliffe Air Base, will parallel the Ottawa River to Cumberland Township. Part of this corridor is reserved by the National Capital Commission for the extension of the driveway east of the Village of Rockcliffe.
[OPA #30, 16 MARCH, 1983, SECTION 3.1.4.3 IN PART]

In the Lowertown West area, (between Sussex Drive and King Edward Avenue) to minimize environmental damage to an established heritage area, it is proposed that St. Patrick Street and Murray Street form a one-way pair. This will require an extension of Murray Street west from Sussex Drive and east from King Edward Avenue to connect with the Alexandria Bridge approach and existing St. Patrick Street.
[OPA #5, JUNE, 1980, SECTION 3.1.4.3 IN PART]

[OPA #23, 19 APRIL, 1982 SECTION 3.1.4.3 IN PART]

In general, all major roadways shown in Schedules "C" and "D" are classified as arterial roads except for the freeways and parkways.

Parkway-type facilities, that is, facilities with no commercial traffic and other characteristics as outlined in Table 3-2, in the network include: the Ottawa River Parkway, the Western Parkway and its extension south from Carling Avenue, the Southern Parkway to Highway 417, the Airport Parkway, the Eastern Parkway and its extension to the Kettle Island Bridge, the Alta Vista Parkway between Walkley Road and the Rideau River, and the easterly extension of Hemlock Road along the Ottawa River to the East Urban Community, and the Vanier Parkway.
[OMB ORDER, NOS. 39, and 41, 11 OCTOBER, 1979, SECTION 3.1.4.3 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 3.1.4.3 IN PART]

[Deleted by OPA #50, 29 JULY, 1985, SECTION 3.1.4.3 IN PART]

The preceding covers the important proposals shown in Schedules "C" and "D". Most other proposals result from attempts to establish a primary road grid, to provide continuity and flexibility, and to eliminate potential points of congestion in the road system. The minor primary roads shown in Schedules "C" and "D" are not considered as arterial roads in the same sense. However, they serve a necessary regional function and, as such, form part of the primary road network.

3.1.4.4 Council's Intentions

In summary, Council:

(1) Shall provide an efficient, safe, and convenient primary road network to complement the public transit system. This road system shall maximize the use of existing major facilities within economic, social, and environmental constraints. [OPA #7, OCTOBER 6, 1980, SECTION 3.1.4.4 (2) ALL]

(2) Adopts the primary road network shown in Schedules "C" and "D" as the framework for planning and design. However, Council recognizes that its implementation requires the cooperation of all levels of government in the planning area.

(3) Shall designate specific rights-of-way for all primary roads under its jurisdiction through the adoption of a by-law, this by-law being subject to amendment from time to time.

(4) Recognizes that the function of major roads in the primary road network is to carry traffic and will ensure that such roads under its jurisdiction be designed and operated accordingly.

(5) Recognizes that certain of the primary roads such as parkways and driveways, fulfill non-traffic service functions; and Council intends that such functions be incorporated in the design and operation of these facilities.

(6) Intends to identify and protect an Outer Ring Road, and to recommend the design of an arterial road system to connect with this Outer Ring Road making as much use of existing rights-of-way as possible to facilitate both private and public transit.

(7) Intends to identify and protect all lands needed for the Outer Ring Road. Following identification of the right-of-way through a route study, Council intends to implement the first stage as a continuous arterial roadway between Highway 417 East and Highway 417 West.

(8) Intends to seek the cooperation of the Province of Quebec to provide a Northern Ring Road, to connect with the Ontario system, with a view to eliminating as much interprovincial traffic from the central core as possible.

(9) Recognizes that minor roads in the primary network fulfill a necessary regional function. However, Council will ensure that widening on such roads under its jurisdiction be limited, where possible, to such things as intersection improvements.

3.1.5 TERMINAL FACILITIES

3.1.5.1 Definition

Whereas rapid transit lines, roads, airlines, and railway lines are facilities on which people and goods move, terminal facilities are where these movements terminate or interchange. They are an integral part of the total transportation system and should be located and operated in such a manner as to be compatible with the efficient operation of all other elements of the transportation system.

Terminal facilities within the planning area can be defined according to whether they serve inter-urban or intra-urban travel.

3.1.5.2 **Inter-Urban Terminal Facilities**

Most inter-urban terminal facilities in the planning area are not under municipal jurisdiction. These include the Ottawa International, Carp, and Rockcliffe STOL* Airports; and the Ottawa Railway Station and Walkley Yard; together with the associated freight and trucking facilities.

This plan does not anticipate any additional major inter-urban terminal facilities being located within the planning area during the planning period. One exception might be the establishment of new STOL facilities. However, this will depend on the success of the demonstration project at Rockcliffe Airport.

The Voyageur Colonial Bus Terminal is an inter-urban terminal facility which is under indirect municipal jurisdiction in that it is a privately owned facility subject to the zoning and access controls of the City of Ottawa and the Regional Municipality.
[OPA #30, 16 MARCH, 1983, SECTION 3.1.5.2 IN PART]

As the population of the planning area grows and increased demands are placed on these facilities, expansion is expected accordingly. Although this plan recognizes the existing facilities, any expansion should be planned to ensure compatibility and efficiency with the total transportation system.

3.1.5.3 **Inter-Urban Terminal Facilities**

Most intra-urban terminal facilities are under varying degrees of control by either the Regional Municipality or local area municipalities. These facilities include parking areas, rapid transit stations, public transit focal points for interchanges between routes, and facilities for freight delivery. Further, most facilities in this category will be implemented or changed in some way during the planning period, either as a result of implementing rapid transit, new development, or the normal processes of change and redevelopment. Furthermore, the location, design, and operation of these facilities has and will continue to have a significant impact on the overall efficiency of the total transportation system and particularly on the effectiveness of public transit.

However, in developing policies for intra-urban terminal facilities, it is apparent that at present, most requirements either depend upon the resolution of rapid transit routings and station location or are matters of detailed planning. For example, the planning of all terminal facilities related to rapid transit requires the completion of the comprehensive system planning identified in Section 3.1.3.2.

The size and location of most parking areas are currently controlled by the zoning or licencing by-laws of the area municipalities. Nevertheless, there is a foreseeable problem pertaining to parking, particularly in areas of concentrated activity. The problem is that the supply, pricing and type of parking has a significant impact on transit ridership

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*Short take-off and landing aircraft.

as well as on the efficiency of the roadway network. In general, these are established primarily by the private sector and are not regulated by any municipal government. On the other hand, the supply of long-term parking in the central area will need to be restricted to reduce automobile travel and increase the usage of public transit, while at the same time, provision of convenient parking at outlying transit stations will encourage park-and-ride trips and so increase transit usage.

Therefore, as public transit is improved progressively, it will become increasingly important to develop a coordinated policy which will include policies on the supply, operation, and pricing of parking facilities. These policies are essential to ensure the effectiveness of the public transit system in carrying the desired portion of travel and in minimizing the need for new roadway facilities.

3.1.5.4 **Council's Intentions**

In summary Council:

(1) Considers transportation terminal facilities such as parking areas, airports, railway stations, bus terminals, transit stations, and truck depots as an integral part of the total transportation system.

(2) Recognizes the existing location of inter-urban terminal facilities and in the planning of any new facilities or expansion of existing ones to cooperate with the other levels of government or the private sector to ensure their maximum compatibility with the total transportation system.

(3) Shall locate rapid transit stations and their complementary parking and feeder facilities such that accessibility to activity locations is maximized and undesirable socio-environmental effects are minimized. Moreover, in locating rapid transit stations, Council shall ensure the compatibility and efficiency of the total transportation system with particular emphasis on the effectiveness of public transit.

(4) Shall cooperate with other levels of government to develop operational guidelines and jurisdiction responsibilities relating to parking supply and pricing. In so doing, Council recognizes the influence of parking supply and pricing on the efficiency of the total transportation system and particularly the effectiveness of public transit.

3.2 UTILITIES

3.2.1 INTRODUCTION

Piped water supply, sanitary sewers, storm sewers, electricity, gas, and telephone are all necessary services for the proper functioning of urban areas. As such, they are essential considerations in determining the location and phasing of growth. The supply and distribution of water and sewage treatment facilities is a responsibility of the Regional Municipality.

In 1969 Regional Council commissioned the firms of James F. MacLaren Ltd. and J.L. Richards and Associates Ltd. to conduct an engineering study and prepare a report on the development of regional water works and waste water control. Council has accepted the report's conclusions in principle. The main objective of Council is to provide sanitary sewage treatment, storm water treatment and water supply to all urbanizing areas in accordance with the priorities established by Council and subject to the policies of Section 2.4.2.8. The servicing program is established in the five year capital budget which is reviewed annually.
[MINISTERIAL MODIFICATION, NO. 7, AUG. 30, 1976, SECTION 3.2.1 IN PART]

3.2.2 **SANITARY SEWERS**

In the MacLaren/Richards study, the program recommended is so designed as to eventually divert all flows to the Green Creek Pollution Control Centre permitting the abandonment of all other treatment facilities and the elimination of all effluent discharges to the Rideau River and to the Ottawa River, upstream of Green Creek. The capacity of the Watts Creek Sewage Treatment Plant was expanded five-fold in 1972 to handle the increased flows from the West Urban Community over the short-term, while the Green Creek Plant is being expanded in stages to handle all anticipated flows from the population residing within the greenbelt and the urban communities outside the greenbelt. The first expansion, doubling the capacity of the Green Creek Plant, is being undertaken. A major trunk sewer system is being constructed within the greenbelt but south of most of the existing urbanized area to be known as the South Ottawa and Lynwood Collector Sewers (see Map 9).
[OPA #30, 16 MARCH, 1983, SECTION 3.2.2 IN PART]

In order to serve the East Urban Community, Council intends to construct the Cumberland-Orleans Collector Sewer to the Green Creek Pollution Control Centre. Some of the Barrhaven part of the South Urban Community is served by a sanitary sewer under the jurisdiction of the City of Nepean. The rest of the area reserved for future development in the south part of Nepean and the south part of Gloucester can be serviced by the collector sewers connected to the Lynwood and the South Ottawa collector sewers. In order that higher standards of purification can be achieved, Council intends that phosphate removal treatment will be introduced to the Green Creek and Watts Creek Pollution Control Centres.
[OPA #30, 16 MARCH, 1983, SECTION 3.2.2 IN PART]
[OMB ORDER, NO. 52, 11 OCTOBER, 1979, SECTION 3.2.2 IN PART]

As indicated in Section 2.4.2.6, some of the villages are at the stage where a sanitary sewer system appears to be required. Expansion of most of the village communities during the planning period will be on individual wells and septic tanks. A sanitary sewer sysem shall be considered only where one is required as of 1974.
[MINISTERIAL MODIFICATION, NO. 8A, AUG. 30, 1976, SECTION 3.2.2 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 3.2.2 IN PART]

3.2.3 **WATER SUPPLY**

The Maclaren/Richards study recommended that in order to maintain and develop the most practical, reliable and economical distribution system, the planning area should continue to be supplied with water from the two purification plants at Britannia and Lemieux Island on the Ottawa River, which will be progressively enlarged as required. As of March 1974, two major groundwater storage reservoirs are being constructed in the Glen Cairn area of the City of Kanata and near the Village of Orleans in the City of Gloucester together with the construction of a basic water distribution system which will be capable of handling the predicted population within the greenbelt, as well as the urban community growth areas. The locations of the reservoirs were dictated by reasons of topography and hydraulics of the water system (see Map 10).
[OPA #30, 16 MARCH, 1983, SECTION 3.2.3 IN PART]

In order to provide adequate service within the greenbelt, continual upgrading and extension of feeder and distribution mains will be required, the most important of which is the South Ottawa feeder main from Kaladar Avenue to Hunt Club Road, the first phase of which is under construction as of 1974.

In order to serve the West Urban Community outside the greenbelt, Council intends to construct a major feeder main from the Britannia treatment plant via Pinecrest Road and Baseline Road. The East Urban Community will be served by a new main from the Orleans reservoir along Regional Road 34, under construction as of 1974. The MacLaren/Richards report includes provision for water supply to the South Urban Community from the central system by the construction of a major feeder main along Woodroffe Avenue and storage facilities inside the Greenbelt. Storage facilities outside the Greenbelt are also likely to be required.
[OMB ORDER, NO. 53, 11 OCTOBER, 1979, SECTION 3.2.3 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 3.2.2 IN PART]

As indicated in Section 2.4.2.6, some of the villages are at the stage where a communal water system appears to be required. Expansion of most of the village communities during the planning period will be on individual wells and septic tanks. A central water system shall be considered only where one is required as of 1974.
[MINISTERIAL MODIFICATION, NO. 8B, AUG. 30, 1976, SECTION 3.2.3 IN PART]

3.2.4 **PHASING OF SANITARY SEWER AND WATER SUPPLY**

Council intends as a matter of priority to develop water and sanitary systems to service all the lands designated "Principal Urban Areas" on Schedule "A". Council is considering the provision of piped services to the South Urban Community and, while preplanning and design of necessary piped services may continue, Council intends that their construction will take place after the first priority noted above is substantially completed.
[OMB ORDER, NO. 61, 11 OCTOBER, 1979, SECTION 3.2.4 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 3.2.4 IN PART]

3.2.5 STORM WATER

The Ontario Ministry of the Environment indicates that storm water discharge into the rivers of the planning area has an adverse effect on water quality. The correction of these problems is essential to the environmental concerns of the area. It is recognized that the treatment of storm water has not been practised to any great extent throughout Ontario, although it is felt this matter must be given serious consideration if we are to protect our water environment in the future. Two courses of action recommend themselves to diminish the adverse effect of storm water on water quality:

(1) Prevention of contaminants entering storm water.

(2) Treatment of storm water discharge.

The first of these measures would involve, for example, the use of vacuum street sweeping and/or flushing procedures. The second or treatment measure includes inter alia such major considerations as flow retention, solids separation and disinfection. Whether any or all of these would apply would depend on the nature of the receiving watercourses and its uses. Rather than hard-and-fast rules, controls should be based upon compatibility of development with overall watershed planning.

It is incumbent on the Regional Municipality and the Ontario Ministry of the Environment to establish water quality standards and related treatment criteria to effect the objectives of water quality improvement and control. In this regard, the Regional Municipality has already instituted a study in conjunction with consulting engineers as to how the treatment of storm water can be accomplished and proposes a pilot study be instituted on the discharge ravine from the South Urban Community. Council will therefore take all necessary steps to ensure that storm drainage receives adequate treatment prior to discharge into area watercourses.
[OPA #30, 16 MARCH, 1983, SECTION 3.2.5]

3.2.6 ELECTRICITY, GAS AND TELEPHONE

These services can be provided to the new urban communities by the appropriate agencies without any foreseeable difficulties and they do not pose limitations for the future form of urban expansion. At the same time, Council recognizes the need to keep the agencies informed as more detailed planning proceeds to assist them in their own planning. This is particularly important with regard to identifying requirements for new rights-of-way so that route alternatives can be assessed well in advance of need.

3.2.7 COUNCIL'S INTENTIONS

In summary, Council proposes:

(1) To continue to develop the water supply, trunk sewers and sewage treatment systems to meet the needs of the growing population in the planning area.

(2) As a matter of priority, to develop water supply, trunk sewer and sewage treatment systems to serve all the designated "Principal Urban Areas" on Schedule "A".

(3) That the Regional Municipality and the Ontario Ministry of the Environment establish prescribed treatment procedures for all storm water discharges from both the established and new urban developments and that once standardized treatment procedures have been established, the respective responsibilities of the Region and area municipalities will be then determined in consultation with the provincial government.
[OPA #30, 16 MARCH, 1983, SECTION 3.2.7(3) IN PART]

(4) To advise utility companies of more detailed plans as they are developed, both with regard to timing and location , and to work with them in locating future utility rights-of-way.

(5) To ensure that all necessary storm water treatment facilities are installed to serve new developments.

PART 4

4.0 CULTURAL RESOURCES AND COMMUNITY FACILITIES

The protection and enhancement of social and cultural features and facilities in the planning area is as important as those of the natural environment. Although Council has limited ability to influence visual appearance directly, it recognizes the need to achieve high standards of appearance and also to preserve the cultural heritage. The substantial investment in community facilities through which services for the social welfare of residents are provided is a somewhat different but equally important concern.

4.1 AESTHETIC AND VISUAL QUALITY

The natural environment of the planning area is handsomely endowed with topographic or physical characteristics of charm and beauty. The relatively flat lands of the east and the rolling lands closely underlain with bedrock in the west are interpenetrated with rivers and streams and broken by prominent features such as ridges, escarpment faces, and waterfalls that provide a wide variety of landscape. The question of protecting the landscape itself is discussed in section 5.6.3 but there is also the aspect of the visual appearance of buildings in a rural setting.

The urban area is spectacularly framed by the Gatineau mountains north of the Ottawa River. The central area occupies a commanding position on the bluff overlooking the Ottawa River, which has the appearance of a lake in this immediate vicinity. Parliament Hill, rising about 50 metres above the river, is a key element in the townscape, both symbolically and visually.

Generally, the visual character of the urbanized area is affected by two main factors: the relative dispersion of commercial and government activities, which tends to reduce their visual impact, and the linear arrangement of open space, which greatly enhances the awareness of space and conveys an impression of a spacious and landscaped community.

The physical effects of development over the years have not been as successful as they might have been in achieving uniformly good quality of appearance. It is important that as the community develops further, maximum advantage be taken of natural and man-made landmarks anad scenic areas.

A visible structure also needs to be established for built-up areas. Districts making up the urban area should be distinct in appearance as well as in function and location. Within districts, details of the design of signing, street furniture and building appearance are also important.

Under a restricted area by-law an area municipality can, among other things, control the height, bulk, location, spacing, and external design of buildings. Where a local official plan is in effect an area

municipality may also require, as part of a proposed development, the provision and maintenance of adequate landscaping and regulate the contouring of the land.

The City of Ottawa has established a Design Committee which reviews developments proposed along major roads or adjacent to land owned by the City, the Regional Municipality, the provincial government the federal government, or a foreign government.
[OPA #30, 16 MARCH, 1983, SECTION 4.1 IN PART]

Council proposes:

(1) to recommend to the area municipalities that they make full use of powers available to them under the Planning Act or other legislation that may be enacted from time to time in order to control the visual design aspects of new development;

(2) to ensure that the buildings or other structures that it constructs shall be of good visual design having regard not only to the structure itself but also to its surroundings;

(3) to explore with the area municipalities the establishment of an advisory committee or other mechanism to assist in the visual design review of selected development proposals.

4.2 HISTORIC BUILDINGS, SITES AND AREAS

As population in the planning area grows, it is inevitable that an increasing threat will be posed to those historic buildings and sites that are not now in public ownership. This threat may take the form of demolition to make way for new development or may mean that the building or site is overwhelmed or its setting otherwise altered so that its attractiveness and general interest is impaired. Buildings and sites of historic interest are shown on maps 11, 12 and 13.* Not all of the identified structures necessarily have to be preserved but they are buildings whose historic worth should be assessed before contemplating any demolition.
[OMB ORDER, NO. 44, 11 OCTOBER, 1979, SECTION 4.2 IN PART]

Additional heritage structures may be designated in local official plans. Certainly an effective program of historic preservation will rely on the interest and initiative shown at the local level. It is also desirable to identify historic areas as well as individual buildings or building groups. This again is a matter for area municipalities to consider in the preparation of local official plans. The ability of municipalities to adequately protect historic buildings and sites has been hindered by absence of legislation which would permit them to act in this area.

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*A listing of buildings keyed to a map location is obtainable through the Regional Planning Department.

Council believes that it is necessary that buildings and sites that are of historic interest be identified in this plan so that attention can be drawn to localities where preservation is desirable and so that the area municipalities and other governments and agencies may take appropriate action.

Council proposes:

(1) That for the purpose of this plan, building sites and areas of historic interest (which shall also include buildings, sites, and areas of a heritage value) be defined as those identified by the National Capital Commission inventory, the inventory of the Ontario Archaeological and Historic Sites Board, the inventory of the Ontario Public Records and Archives Branch, the Canadian Inventory of Historic Buildings, and the inventory of the Historic Sites and Monuments Board of Canada; and will adopt by resolution the above lists identifying and locating these historic sites, structures, and areas for the purpose of these policies; and will amend these lists from time to time as other studies are completed. In this latter regard, consideration will also be given to such inventories as may be compiled by area municipalities within the Region.
[OMB ORDER, NO. 44, 11 OCTOBER, 1979, SECTION 4.2(1) IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 4.2(1) IN PART]

(2) To request the completion of the Canadian Inventory of Historic Building within the planning area by the National Historic anad Sites Service in order that a complete inventory of all buildings, sites, and areas of historic importance can be compiled.
[OMB ORDER, NO. 44, 11 OCTOBER, 1979, SECTION 4.2(2) IN PART]

(3) That prior to the undertaking of public works or the enactment of restricted area by-laws consideration be given to the possible effect of such works or by-laws on historic buildings, sites or areas.

(4) To consider ways and means in which it may acquire or cooperate in the acquisition or protection of historic buildings, sites, or areas as may be permitted by legislation.

4.3 COMMUNITY SERVICES AND FACILITIES

4.3.1 INTRODUCTION

The provision of various types of community service (education, recreation, health care, etc) is tied in very closely with the facilities available as it is these facilities which in large measure determine the ease and convenience with which the various community services can reach the user. Shortages, inadequate or overcrowded facilities affect the quality of the community service that can be provided. Many such facilities provide services at the local or neighbourhood level and are the responsibility of area

municipalities or agencies other than the Regional Municipality. At the same time, the exact nature of the need for each often does not become evident until planning is undertaken at the community level, whether this involves studies of existing communities or the preparation of subdivision plans to create new ones. Community facilities are, however, important components in the overall frame work contributing to social well-being and it is important that Council's relationship with area municipalities and other agencies relative to such facilities be stated.

Depending on the type of community facility, Council has a threefold concern. First, Council itself has responsibility for the provision and operation of a number of facilities. Homes for the aged are in this category. Both the construction and operation of these homes are a direct responsibility of Council. Council is also responsible, at the request of an area municipality, for establishing day nurseries. Although not responsible for the provision of nursing home accommodation, Council is responsible for ensuring that those needing nursing home care are placed. Council also contributes financially to the construction of hospitals.

A second concern of Council in the development of the planning area is that optimum use is made of facilities that exist and that the development policies proposed do not conflict with the provision of any new facilities that may be required. Of particular importance in this respect are the provisions for parks and schools, both of which represent an essential local service and a substantial investment. While this general concern is more specific in the case of parks and schools, it also affects the provision of libraries, community centres, and police and fire protection services.

A third matter of concern to Council is the location of major institutions as they may affect the provision of regional services, particularly roads and public transport. This category includes universities, community colleges and hospitals.

The policies of this plan are therefore directed to satisfying these three concerns namely: to ensuring that the Regional Municipality may economically discharge its direct responsibility; secondly to ensuring that the pattern of development that evolves will provide for an adequate level of community services that are under the jurisdiction of area municipalities, local boards, or other agencies; and finally to ensuring that the siting of major institutions accords with the provision of transportation and utility services.

Council's concern with regard to community facilities is reflected not only in the following discussions of each but is also a factor considered in establishing the future pattern and density of growth. This is mentioned in section 2.2.1 and is particularly related to the second of the three concerns noted above.

4.3.2 COMMUNITY CENTRES

The term "community centre" can apply to any accomodation which consists of a hall or rooms for public use. Community centres may be purpose-built or they may occupy space in larger buildings. Under the Community Centres Act, provincial grants are payable to area municipalites towards the cost of construction, alteration, extension, acquisition, or renovation of a community hall.*

Community centres, especially in urban areas, are often part of a larger complex consisting of a park, an indoor swimming pool, or a hockey arena (see Map 14). In addition, they may themselves contain other facilities such as a day care centre and, particularly in the rural areas, might be used to house libraries.

The advantages of locating more than one type of community building on the same site or more than one facility in the same building are two-fold. Firstly, the physical proximity of related facilities make them more conveniently accessible and secondly, there is a saving in land or building requirements. The fact that provincial grants are available for several types of facilities is an added encouragement for including more than just a hall in the construction of a community centre. The combination of activities on the same site need not be restricted to those mentioned above as there are advantages to combining community centres with schools and community social service centres as mentioned later. Obviously this is not something that can be achieved in all instances as, for example, there is not the need to build a community centre for each school constructed. Council considers that the determination of what community centre facilities should be located on a site to be a matter of area municipality concern.

4.3.3 PARKS

For the purposes of this plan, parks are considered in three categories: local parks, regional parks, and passive parkland. Some area municipalities, however, use other terminologies. The greatest need for the first two types of park space occur in the urban parts of the planning area while some of the latter types of park can be, provided in the rural parts of the planning area or even outside the area altogether (e.g. the Gatineau Park).

The present availability of park space in the five urban municipalities of the planning area is shown in Table 4-1. Map 15 illustrates the major parks on the inside of the greenbelt.

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* Under the Community Centres Act, these grants are also available for athletic fields, indoor and outdoor swimming pools, skating rinks and outdoor rinks.

Table 4-1

Park Availability 1972[a]

	Local[b]	Regional[c]	Passive[d]
Ottawa	230 ha	86 ha	445 ha
Vanier	1 ha	–	11 ha
Rockcliffe Park	1 ha	–	13 ha
Nepean	108 ha	40 ha	55 ha
Gloucester	48 ha	18 ha[e]	
Total	388 ha	144 ha	524 ha

[a] In addition to the areas listed, there are certain other open spaces and natural areas which are not developed for public use as of March 1974.

[b] Parks intended to serve a specific area, as opposed to being a municipality-wide facility, and which are commonly called "neighbourhood", "community" or "district" parks. "District" parks are included as they invariably serve a "neighbourhood" - "Community" function also. These parks are intended essentially for active recreation.

[c] Parks intended to serve the whole or large portions of a municipality and which by the City of Ottawa would be called "municipal" or "regional" and which by Gloucester would be called "township". These parks are intended essentially for active recreation and hence the Gatineau Park, for example, does not fall within this definition. Examples of such parks are Mooney's Bay and Brewer Park.

[d] Parks which are essentially for "informal" or "unorganized" activities and are not intended to meet needs for active sports and games. These are mostly N.C.C. owned parks, although some N.C.C. parks are operated by the City of Ottawa for active recreation purposes and accordingly are included in the first two columns. A small proportion of this 526 hectares has not been developed as park as of March 1974. The various "lookout" areas along the Ottawa River Parkway are included in the total but not other land along the parkways.

[e] This includes the 12 hectares site near Green Creek owned by the City of Ottawa. Only a small part of this site is developed for park purposes as of March 1974.

[OPA #30, 16 MARCH, 1983, SECTION 4.3.3 IN PART]

While it is difficult to establish standards for parks, and any standards that are established are to some extent arbitrary, four of the five municipalities shown in Table 4-1 have themselves adopted standards. These are shown in Table 4-2.

Table 4-2

Park Standards

	Local	Regional	Passive
Ottawa[a]	1.6 ha / 1,000 pop.	2.4 ha / 1,000 pop.	4.0 ha / 1,000 pop.
Vanier[b]	0.5 ha / 1,000 pop.	–	–
Rockcliffe Park	As very little new development is expected, standards have not been formulated.		
Nepean[c]	1.2 ha / 1,000 pop.	–	–
Gloucester[d]	1.2 ha / 1,000 pop.	0.8 ha / 1,000 pop.	–

[a] From list of standards prepared by the City Recreation and Parks Department.

[b] From Vanier Official Plan 1973.

[c] From Nepean Official Plan 1972. Nepean's requirements for regional and passive parks have not been quantified.

[d] From Township of Gloucester Official Plan, Amendment No.1 Northeastern Section 1966. This standard is different for various areas of the Township.

[OPA #30, 16 MARCH, 1983, SECTION 4.3.3 IN PART]

Except in the case of the City of Vanier, there is a general similarity in the standards for local parks but a wide divergence in the standards for any higher levels of parks. On the basis that they themselves have established, all these municipalities, with the exception of Nepean and Gloucester, are well below the standard recommended for local parks alone, and all municipalities are below the standards for all other kinds of parks although regional and passive parks do not necessarily have to be located in the municipality whose population they serve.

The reason for the above situation is that the recently developing suburban municipalities of Nepean and Gloucester have been helped in part by the provision of the Planning Act, whereby on subdivision of land they receive five percent of the holdings of the landowner for park purposes, or are paid monies in lieu of the granting of the land. However, this five percent provision is generally inadequate to provide for even local park needs unless the subdivision contains very little multi-family housing so that land purchases are also necessary in order to meet the standards.*

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* 1973 amendments to the Planning Act permit an area municipality to require park space be conveyed to the municipality at a rate of 0.4 hactares for each 120 dwelling units, providing they have an official plan containing park provision requirements which requirements have been approved by the Minister subsequent to the Act amendment.

The City of Gloucester under its private Act can require 2 hectares of parkland per 1,000 population in any proposed multi-family development.

[OPA #30, 16 MARCH, 1983, SECTION 4.3.3 IN PART]

What clearly emerges is that there are two areas of major deficiency in the present provision of parks. The first is in the older built-up areas where generally even the most minimum standard is not achieved. Map 16 shows the local park adequacy in the developed areas.

The second is in the provision of regional parks intended essentially for active recreation such as Carlington and Brewer Parks. Because of the comparatively large amounts of land required and the fact that some municipalities are running or have already run out of available land, there is a danger that some municipalities may not be able to create any more such parks within their boundaries. These parks cannot be provided out of the 5% lands.

Regional parks generally serve more than just one area municipality and as such the responsibility for their provision should not have to fall on the shoulders of just one municipality which, as noted above, may not have the land to provide such anyway. In this regard, Council sees a role for the Regional Municipality in that given changes in the Act under which it operates, it could assist in meeting future needs for regional parks and a regional open space network. Council could also play a co-ordinating role in assessing the overall recreational resources and needs in the planning area in order that a framework can be established to assist the area municipalities and other agencies in fulfilling their various functions. In this way gaps and overlaps can be minimized.

Park standards as noted in Table 4-2 are not the same for each area municipality and some municipalities have not formulated any standard. Because situations vary not only between municipalities, but also from district to district within a municipality, park needs will also vary. The planning area - consisting as it does of high, medium, and low density urban areas, villages, country estates, and farmsteads - does not lend itself to the establishment of uniform park standards to be applied equally everywhere. Nevertheless there is need for guidelines as to open space requirements in those area municipalities which have no standards established in local official plans.

The standard of 4 hectares of open space per 1,000 population is one used by many Ontario municipalities and can be used as a broad guideline until area municipalities adopt park standards best suited to their municipality as part of a local official plan.

In addition to and including the parkland both within and on the inner side of the Greenbelt, there are other large open spaces such as the Experimental Farm and the Animal Research Institute. Policies towards these major open spaces are contained in Section 2.5.2.

Council proposes:

(1) To request the provincial government to amend the legislation so that the Regional Municipality may purchase land for, develop and operate parks in order that Council may make a positive contribution towards the

establishment of regional parks and a regional system of open space.
[OPA #30, 16 MARCH, 1983, SECTION 4.3.2(1) IN PART]

(2) To review in conjunction with the area municipalities and other approprate agencies the recreational needs and resources in the planning area.

(3) That, in approving or commenting on plans of subdivision, plans of condominium, restricted area by-laws, and local official plan amendments that relate to land undeveloped at the time of this plan's adoption by Council, to use the following as a guideline until such time as the area municipalities have adopted their own standards through a local official plan unless they have already done so, in which case the standards contained in the local official plan shall apply.
[OMB ORDER, NO 16, 11 OCTOBER, 1979, SECTION 4.3.3(3) IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 4.3.3 IN PART]

- 2 hectares of parkland in urban areas per 1,000 population, and

- in providing public open space both with regard to parks in urban areas and in larger natural or semi-natural parks in the rural areas, an overall provision of 4 hectares of parkland per 1,000 population.

(4) That in approving or commenting on restricted area by-laws and local official plan amendments that relate to land already developed at the time of this plan's adoption by Council, to use the following as a guideline until such time as the area municipalities have adopted their own standards through a local official plan unless they have already done so, in which case the standards contained in the local official plan still apply.

- 1 hectare of local park per 1,000 population.

[OPA #30, 16 MARCH, 1983, SECTION, 4.3.3(4) IN PART]

4.3.4 SCHOOLS

The provision of schools in the planning area is the responsibility of four boards: the Ottawa Board of Education and the Ottawa Roman Catholic Separate School Board which serve Ottawa, Vanier, and Rockliffe Park; and the Carleton Board of Education and the Carleton Roman Catholic School Board which serve the other municipalities. Maps 17 and 18 show the locations of the existing schools.

In assessing the availability of sufficient school accommodation to meet the student enrollment, it is of significance to examine only those areas that are substantially built up, as in the developing areas any temporary shortages in school provision can be overcome by constructing new schools as subdivisions

proceed. On the other hand, any spare school accomodation in these new areas can be expected to be utilized once the communities are fully developed.

Map 19 shows which elementary schools in the area substantially developed by 1972 had spare accommodation and which were short of space as of 1971-1972.* Long-term future school enrollments can be estimated in general terms from the projections for school age populations.**

For the former Carleton County, the proportion of the population aged 5-14 years is forecast to decline from 21% of the population in 1966 to 15% in 2001. Despite this relative decrease, however, there is an increase in absolute terms as the total population grows. In this regard, the demand for schools in new areas does not pose any major problems for overall long range planning. However, those areas already built-up will, in all likelihood, continue to experience decreases in school enrollment. The effects of this are not necessarily serious as, if certain existing schools become obsolete or surplus during the planning period it provides an opportunity for meeting certain other community needs, such as that of local parks.

All four boards permit, in general, community use of their school buildings and sites outside school hours. In addition to this cooperation, it is possible for schools and community buildings to share the same site. This not only results in an overall saving in land but the physical proximity assists in the sharing of facilites. Examples in this regard are to be found in Glencairn and at the proposed St. Lukes Park/Elgin Public School complex in downtown Ottawa. Council favours such cooperation between school boards and area municipalities as being advantageous to the community as a whole. There are also space saving advantages if a school site is combined with a park.

In summary therefore Council:

(1) Expects the school boards to plan for their furture needs based on this plan and on subsequent more detailed planning.

(2) In commenting on or approving plans of subdivision shall, in conjunction with the area municipalities and school boards, give consideration to locating school sites adjacent to a local park or community centre being provided in the subdivision.

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* Information from which the relationship between school capacities and school enrollments was assessed was obtained from the school boards in 1971 and 1972. The date of this information is not the same for each board. The "elementary" schools shown include all schools from kindergarten to Grade 8.

** For the purposes of this plan it has been assumed that the Ontario Government's forecasts are likely to be met: population projections by counties, 1966-2001 by five-year age groups. Assumptions: Fertility B, Migration 50,000 per annum, Department of Treasury and Economics, 1970.

(3) Shall request the school boards to offer for sale first to the area municipalities and secondly to the Regional Municipality any school sites which the boards may no longer require.

(4) Shall request area municipalities by way of subdivision agreement or otherwise to ensure land is available to the school boards at the lowest possible cost.

4.3.5 HOSPITALS

The Ontario Ministry of Health has the responsibility for ensuring the development of hospital services throughout the Province. The Ministry is responsible for determining hospital needs and all hospital building programs are subject to its approval. The Province pays towards the cost of hospital construction with the Regional Municipalilty paying that part of the balance that a hospital board does not obtain through its own fund raising.

Two advisory bodies have been established by the Province to present a community viewpoint of health and hosptial needs to the Ministry of Health. The Ottawa Regional Hospital Planning Council is concerned with assessing hospital needs and the Ottawa-Carleton Regional District Health Council, established in 1974, coordinates all health programs in the Regional Municipality. These bodies have representation from municipalities, hospitals and medical organizations as well as private citizens.

As of 1974, there are some 3,600 hospital beds in Ottawa-Carleton distributed among nine hospitals* and Beacon Hill Lodge. There is also the National Defence Medical Centre which is solely for members and former members of the armed forces. The location of hospitals is shown on Map 20.

Future construction either underway or planned as of 1973** will provide a total bed supply as follows.

Table 4-3

Type of Service	Existing & Proposed Beds [a]
Active Treatment	2,899
Psychiatric	245[b]
Chronic	727
General Rehab.	50
Special Rehab.	100

[a] Derived from lists prepared by the Ministry of Health with minor adjustments (1973)

[b] Excluding children's beds.

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* Ottawa Civic, Ottawa General, Montfort, Riverside, Salvation Army Grace, St. Vincent, Royal Ottawa, The Perley, the Children's Hospital of Eastern Ontario.

** The Children's Hospital of Eastern Ontario, the Queensway- Carleton Hospital, a new Ottawa General Hospital and Rehabilitation Centre.

The population assumed in this plan of 1,000,000 will exercise a demand for hospital beds well beyond that envisioned in the above mentioned building programs. Because standards may change as well as methods of delivering health care services, the size of this demand cannot be accurately forecast, but in terms of 1973 standards, an additional 1,100 active care, 221 psychiatric, 273 chronic and 100 general rehabilitation beds would be required without making any allowances for population increases outside the planning area. The scale of the demand will necessitate the eventual construction of a new hospital or hospitals and cannot be met by expanding facilites present or proposed as of 1974.

Existing and proposed active treatment beds will be able to satisfy the needs of a population in the order of 725,000. It is not expected that this level of population will be reached until the late 1980's, and it therefore appears very unlikely that there will be a need for any new hospitals - except those already proposed - until then. Because of possible changes in methods of delivery of hosptial services* and of provincial standards, as well as changes in population age structure, it is not possible to accurately predict hospital needs that will arise in the 1980's. The following general comments, however, reflect thoughts with regard to the land use aspects of hospital planning as provided by the Ministry of Health in 1973.

The Ministry advises that there is no optimum size for a hospital but that it is their general opinion that the smallest hospital should be 75-100 beds and the maximum size not more than 750 or 800 beds since coordination and efficiency of operation tend to be difficult beyond this level. In the planning area, by virtue of its hospitals serving a large region,, it is not likely that any new hospitals would be less than 300 beds. Although there are no provincial guidelines for translating this figure into site acreage required, such a site would probably not be less than 4 hectares. Hospitals are not massive land users whose sites must be set aside many years ahead of development and they can be incorporate into the secondary level of planning for developing areas. Their main requirement is that they be easily accessible by road and public transportation but centrality to an area is not significant. In this regard the Ottawa Regional Hospital Planning Council has advised that a hospital site or sites may not necessarily be required in any of the proposed growth areas outside the Greenbelt and that the needs of these residents may be met by new hospitals located on the inner side of the Greenbelt.

Council proposes:

(1) That no new hospital site shall be established without such site being first approved by Council in consultation with the area municipalities.

(2) To provide a good level of service to all hospitals in developing the public transport and road system.

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* The possible development of community health centres whereby certain services now performed in hospitals are provided instead at the local level is a factor in this regard.

(3) To request the Ottawa Regional Hospital Planing Council or successor organization to advise of changes that develop relative to the need for and method of accommodating hospital care.

4.3.6 FIRE AND POLICE PROTECTION

4.3.6.1 Fire

The establishment of fire departments is at the discretion of each area municipality and, as Map 21 indicates, most municipalities contain at least one fire hall. Regardless, however, of whether a municipal fire force is available, inter-municipal cooperation enables fire protection to cover the entire planning area. This cooperation may take the form of contracts whereby one municipality will make its facilities available to the other at a fee. In addition to the contractual arrangements, the planning area forms a single unit for the purposes of the provincial Mutual Aid Program. Under Mutual Aid, each municipal fire force can call on the next nearest force in emergency situations (and then on the next nearest again if necessary). Mutual Aid, unlike contractual arrangements, is not supposed to be used on a routine basis nor is it available to those municipalities that do not operate a fire force. There is, however, an understanding between fire chiefs that regardless of formal arrangements, one force will help another if there is the need.

There are no provincial guidelines to indicate at what population level a municipality should establish a full-time force as opposed to relying on volunteers, although the Ontario Fire Marshal recommends that there be a full-time fire chief for all municipalities with over 5,000 population. Municipalities should recognize that a full-time fire-fighting force is a likely necessity when urban growth, major growth around villages, or substantial country home developments are permitted.

4.3.6.2 Police

Every city and town is responsible for its own policing, whereas townships and villages require the approval of the Ontario Police Commission if they wish to establish a police department. Ottawa, Vanier, Nepean, and Gloucester operate their own forces and the rest of the planning area is served by the Ontario Provincial Police. Map 21 shows the distribution of police stations.

New stations are likely to be required only if a municipality wishes to assume its own policing as it grows. In such an instance, a study would be undertaken by the Ontario Police Commission to see if this would be feasible. There are no provincial guidelines to indicate a population level at which policing might best become a direct function of an area municipality. Because of the additional costs that this would bring, it should not be assumed, however, that a municipality would necessarily want to become self-policing.

4.3.7 LIBRARIES

Libraries and library service are provided by the area municipalites with assistance being available from the regional library systems. The provincial government pays an annual per capita grant towards the operating costs of both regional library systems and also municipal libraries. The planning area is within the Eastern Ontario Regional Library System which comprises nine counties in addition to the Regional Municipality. The function of the Regional Library System is essentially to upgrade library services and encourage the formation of libraries where none currently exist. It is involved in developing resource libraries from which smaller local libraries can borrow books, lending books directly to local libraries and providing advice on the establishment and operation of libraries. It does not provide library accommodation nor does it itself operate libraries - this being at the discretion of the area municipalities. Map 22, showing the distribution of libraries, indicates that some municipalities do not operate a library service although borrowing privileges of the Ottawa public libraries are available free of charge to residents of the area served by the Eastern Ontario Regional Library System. There are also local inter-municipal arrangements to permit free borrowing.
[OPA #30, 16, MARCH, 1983, SECTION 4.3.7 IN PART]

Municipal attitudes and policies towards the provision of library services vary. In general, library provision in the rural areas has been left to the interest and initiative of local residents. In urban areas, it has been a municipal undertaking.

Libraries of the boards of education are a potential resource. Libraries at the Kars Public School and the South Carleton High School at Richmond are available to the public under arrangements made by the Carleton Board of Education. Nepean is considering the use of the library facilities of Sir Robert Borden High School. There are disadvantages associated with public use of school libraries in that they are not available during school hours and contain a somewhat limited fiction selection. Accordingly, school libraries can be regarded only as adjuncts but not complete substitutes for municipal library facilities.

Bookmobile service is another way in which library facilities could be made more accessible. According to the Regional Library System this may not be financially possible at present. A bookmobile service is operating in the combined counties of Stormont, Dundas and Glengarry. These counties form a single public library board and are eligible for the annual municipal grant from the Province. In the planning area there is no one board covering the whole area which could operate a bookmobile service and which would qualify for such a grant. If library service were to become a responsibility of the Regional Municipality, not only would there be an annual municipal grant but the contributions of member municipalities would be pooled towards the development of a unified service.

Council proposes:

(1) To explore the desire for and possibilities of providing a broader range of library service in conjunction with the Eastern Ontario Regional Library System and the area municipalities and library boards.

4.3.8 **DAY NURSERIES**

Although the Regional Municipality may operate day nurseries, most are provided privately. A local municipality and the provincial government may subsidize the fees of some children attending such nurseries where the families have been assessed as eligible under provincial legislation. Any such purchase of service arrangements must be approved by the Regional Municipality. Maps 23 and 24 show the distribution of day nurseries, some of which provide full-day and some part-day programs. Demand for the latter is met in part by the classes for four year olds which are provided by the Ottawa Board of Education and both the Ottawa and Carleton Separate School Boards.
[OPA #30, 16 MARCH, 1983, SECTION 4.3.8 IN PART]

The Day Nurseries Branch of the Province has no standards that could be used to project future demand for day nursery facilites nor do certain other studies* answer this question. Problems in this regard relate to such future unknowns as the number of women in the labour force or at school, the extent to which mothers may be able to use relatives or friends, as well as people's attitudes to day care. In addition, it has been suggested that the provision of a day nursery may tend to increase demand (e.g. if a nursery is available then the mother may decide to go to work). This is not to say that day nursery needs cannot be planned for but rather it is a service which lends itself more to short-range planning.

Council, in February 1974, adopted a six-year program for expanding day nursery services, which includes 24 neighbourhood-based day nursery centres, 6 employer based centres, 50 after-four programs on school premises and the provision of private home day care services. The implementation of such a program is dependent entirely on the support of the area municipalities under present legislation.

The Province has recommended general guidelines with regard to the locational requirements of day nurseries. The site should be centrally located or easily reached from any part of the area intended to be serviced. It should be on or near a bus route. (There is no guarantee that children can be accomodated in the centre nearest to their home.) If possible, the site should be adjacent to a park or school so that advantage can be taken of the open space.

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*"Day Care Needs of Children in Hamilton and District" - The Social Planning and Research Council of Hamilton and District, July, 1971.
"A Study of Day Care in the Greater Windsor Area" - Social Planning Division, United Community Services, January, 1968.
"Day Care", Report of a national study by the Canadian Council on Social Development, January 1972.

The above provincial recommendations apply to the construction of new buildings but day nurseries can be located in existing buildings such as community centres, churches and private homes. They can also be incorporated into multi-family housing developments - both private and public. In addition, each of the four school boards in the planning area is prepared to entertain requests from people wishing to run day nursery facilities in school buildings providing the board feels that space is available and can be spared. In some cases also, it may be possible to build a day nursery on the site of an existing school either as a separate structure or as an addition to the school building.

Council proposes:

(1) To undertake a continual review of the need for and availability of day nurseries.

(2) When intending to establish a day nursery, to give preference to sites that are on a public transport route and adjacent to a park, or adjacent to or within a school or apartment building.

(3) To encourage the use of existing suitable accommodation in schools, community centres, churches and other buildings for day nursery purposes.

(4) To encourage the area municipalities to consider the inclusion of space and facilities for day nurseries when new community centres are proposed or major development proposals are before them for consideration as applications for approval of plans of subdivision, plans of condominium or of restricted area by-laws.
[OPA #30, 16 MARCH, 1983, SECTION 4.3.8(4) IN PART]

4.3.9 **HOMES FOR THE AGED**

It is a statutory responsibility of the Regional Municipality to maintain a home for the aged according to the provisions and regulations of the Homes for the Aged and Rest Homes Act of the Provincial Ministry of Community and Social Services. As of March 1974, two homes are owned and operated by the Municipality under the direction of a Committee of Management which is appointed by and reports to Council. Island Lodge provides accommodation for 403 residents and Carleton Lodge 132 for a total of 535 beds (Maps 25 and 26). The Province subsidizes capital expenditures and net operating deficits.

Homes for the aged provide care for persons over 60 if prior approval is given by the Minister of Community and Social Services. The lodges do not attempt to duplicate the services or facilites of a hospital but have a definite objective which is to provide a comfortable home and competent care for disabled elderly persons who cannot care for themselves. People suffering from an acute or active illness which requires hosptial treatment are not eligible for admission to a home for the aged. Catering as they do for people who need institutional care, they are different from senior citizen housing which is financed under the National Housing Act.

It is difficult to estimate how many of the elderly will require accommodation akin to that provided by a home for the aged and the extent to which private boarding homes will be able to meet this need. The provincial government has found, however, that province-wide, the need for homes for the aged has been in the order of 30 beds/1,000 population aged 60 years and over. This figure is not a standard that municipalities must meet but is an indicator as to possible demand. Based on age-group projections prepared by the provincial government, it can be estimated that by the turn of the century, 15% of the population of the planning area will be aged 60 years and over, compared to 10% in 1966. Based on a planning area population of 1,000,000 and on the 30 beds per 1,000 aged 60 years and over noted above, a demand for 4,500 beds is implied.

It is not suggested that the figure of 4,500 beds can be used for accurate long-range planning, particularly in view of the uncertainty of future growth rates. However, it is to be expected that the aging of the population will create a relatively higher level of demand for accommodation in homes for the aged.

In addition to erecting new buildings to meet this demand, it may prove possible to convert small apartment buildings or hotels, the latter being preferable as they contain more communal spaces. In this way, accommodation can be provided in developed areas where vacant sites might not be available. This increases the opportunity for locating the homes in close proximity to community and commercial facilities, which is particularly important to the elderly. It also increases the opportunity to provide accommodation in various areas thus giving a wider choice to residents. The opportunity to disperse the homes is increased if several smaller residences rather than fewer larger ones are built. The Province has suggested that to avoid too large an institution, an upper size limit is in the order of 200 beds.

Desirable locational considerations include not only nearness to community and commercial facilities as noted above, but also proximity to bus routes and parks.

Council proposes:

(1) To undertake a continual review of the need for and availability of accommodation for the aged and maintain contact with other agencies providing accommodation for the aged (such as senior citizen public housing, nursing homes, boarding homes).

(2) That, wherever possible, homes for the aged shall be located in proximity to commercial and community facilities as well as public transportation routes without prejudicing the need for quietness and safety.

(3) That in the siting of new homes for the aged, to have regard to the desirability of locations that can serve different parts of the planning area and for this and other purposes, it shall:

- consider the acquisition of existing buildings that may be suitably used for homes for the aged;

- limit the size of any new homes for the aged to no more than 200 beds.

4.3.10 NURSING HOMES

The provision of nursing homes is not a responsibility of any level of government although the Regional Municipality must ensure that nursing home care is available to those who need it. In this regard, the Regional Municipality, in some cases, and the Ontario Health Insurance Commission in other, subsidizes the cost of a person's nursing home accommodation. Nursing homes are intended to serve essentially those who, while needing more nursing care than would normally be provided in a home for the aged, do not require hospitalization. However, if nursing home accommodation does not meet demand, an extra load is then placed on the homes for the aged and active treatment hospitals.

The provincial government has found that 3.5 beds per 1,000 population is a general guideline that can be used in assessing the demand for nursing home accommodation, although each time a proposal to establish a new nursing home is received, a survey to determine the need is undertaken. As of March 1974, there were ten licensed nursing homes in the planning area containing a total of 1,267 beds. (Maps 25 and 26 show the location of these homes.) This number compares with 1,652 beds required if the 3.5 beds per 1,000 guideline is applied. Using the same guideline, a planning area population of 1,000,000 implies a need for 3,500 beds.

As distinct from the situation with regard to homes for the aged, it is most unlikely that any of this future demand will be able to be met by converting existing buildings to nursing home accommodation. The provincial government's new standards are such that conversions can probably be regarded as a thing of the past.

With regard to size of nursing homes, economics suggest a minimum size of around 50 beds, whereas to avoid too large an institution, an upper limit of 250 beds has been suggested.

Wherever possible, homes should be located in proximity to commercial and community facilites as well as public transportation routes without prejudicing the need for quietness and safety. As new homes are constructed, they should be sited in different districts so as to provide residents with a choice of location.

Council proposes:

(1) To review the supply of beds available in nursing homes continually to determine that adequate provision is being made by private owners, and to recommend appropriate action to the provincial government in order to rectify any situation of long-term serious shortage.

[OPA #30, 16 MARCH, 1983, SECTION 4.3.10(1) IN PART]

4.3.11 COMMUNITY SOCIAL SERVICE CENTRES

A community social service centre is a term used to describe a building that houses a number of government or voluntary agency services brought into one location to serve a particular neighbourhood or district. Examples of the services that could be provide in such a centre include: public health, child welfare, family casework service, public welfare and assistance, legal aid, Canada Manpower services, and credit counselling. They may also provide space for community residents who want to organize certain programs for themselves.

A trend has been developing in the field of the delivery of social services towards what are sometimes loosely called "store front" operations. This has been occasioned by a concern that the various services government provides are perhaps not reaching as many people as they should and it has been suggested that one way to help overcome this would be to bring the source of these services physically closer to the people. This can be accomplished through decentralization whereby the services, instead of operating out of, say, only one building in a municipality, operates from several locations throughout the area. If the various decentralized services are then located in the same building this not only makes them more conveniently accessible but also facilitates inter-agency referral. Another advantage is that a smaller building serving a local area projects less of an "institutional" image and can bring more of a personal approach to the needs of its users.

Community social service centres do not provide specialist services - for these, people would be referred to, say, a hospital depending on the type of service needed. The services they house can vary from area to area and this in turn should influence who should be responsible for their establishment and operation - it need not necessarily be the Regional Municipality. In identifying service needs and in assisting in their operation, community residents may be able to play a role. The distribution of the centres need not be uniform but should be located where the caseload of the various agencies is relatively high. As they are a local community facility, a central location with regard to the area they are intended to serve is important. This is a particularly important consideration with regard to their being readily accessible to the elderly. If they are built in association with community centres or schools, then the physical integration of services can be increased further.

The concept of community social service centres has been accepted by the Ottawa-Carleton Social Services Committee and two centres are in operation - one in Lower Town and one on Rochester Street.

Council proposes:

(1) That with regard to the discharge of its social service responsibilities, to promote the establishment of community social service centres where the need is demonstrated and to encourage their use by the area residents.

(2) That when it establishes community social service centres, to locate these, where possible, adjacent to other appropriate community facilites and central to the area the centres are to serve.

4.3.12 UNIVERSITIES AND COLLEGES OF ADVANCED EDUCATION

The advanced education institutions in the planning area consist of: Carleton University, the University of Ottawa, Algonquin College of Applied Arts and Technology, and Saint Paul University. (Map 27).

Carleton University

As of December 1973, the University has an enrollment of 8,200 full-time and 5,400 part-time students. The University expects full-time enrollment to reach 9,200 by 1979-80 with also a small increase in part-time students. No precise estimate has been made of how many students could be accommodated on the 60 hectares which the University owns but the present enrollment could probably be more than doubled. With continuing very slow growth expected, however, the site may never be developed to a maximum. The University accordingly sees no need for any site expansion or for the establishment of new campuses.

University of Ottawa

The University has a full-time enrollment of 9,300 for 1973-74 which they see increasing to 10,400 by 1977-78 and eventually to an ultimate full-time enrollment of 14,500. This last figure is based on the capacity of their expanded campus - this being 34 hectares. Beyond this point the University foresees no further expansion either at the present location or by establishing new campuses elsewhere in the planning area.

Algonquin College of Applied Arts and Technology

The College's full-time post-secondary enrollment in November 1973 was 5,500. Of this, 100 was at the Pembroke campus and the remainder distributed as follows:

Woodroffe Avenue Campus	-	3,700
Lees Avenue Campus	-	900
Colonel By Campus	-	800
		5,400

The College estimates that there is sufficient land at the Woodroffe and Lees Avenue campuses to accomodate more than double the 1973 enrollment for each, while the Rideau Campus could accommodate in the order of 3,000. A total for the three campuses would be about 13,500 full-time post-secondary students or two and a half times the 1973 enrollment. Because of the land still available and the likelihood that the provincial government will expect this to be efficiently used before any new campuses are created, there is no foreseeable demand for additional sites.

Saint Paul University

This is a theological institution with a 1973 enrollment of 300 full-time and 200 part-time students. The University expects little change in these figures and has no need nor intention to expand beyond its present site.

Because of the large increases over their 1973 enrollments that the campuses of Carleton, Ottawa and Algonquin could accommodate and the fact that Saint Paul University expects little enrollment change, it appears that additional campuses may not be required to meet the needs of a population of 1,000,000 in the planning area.

In case a new campus does however prove necessary, it should be noted that a large campus is a heavy traffic generator and consequently good access by both public and private transportation should be a most important consideration in choosing a new site.

Council proposes:

(1) That no new university and college campus shall be established without the site being first approved by Council, in consultation with the area municipalities.

(2) To provide a good level of service to all university and college campuses in developing the public transport and road system.

PART 5

5.0 NATURAL RESOURCES AND ENVIRONMENTAL MANAGEMENT

To ensure the protection, enhancement and, where appropriate, development of the natural environment and physical resources of the planning area, Council proposes action in six main areas of concern:

- agriculture
- mineral resources
- conservation-recreation
- river corridors
- marginal lands
- environmental management

On the basis of the natural characteristics of the land, the rural part of the planning area has been divided into a number of policy areas on Schedule "A" which reflects the above concerns. The following sections set out Council's policy approach to each of these areas, particularly with respect to appropriate activities and land uses.

The final section of this part of the plan sets out Council's intentions with respect to environmental management and therefore deals with the entire planning area.

5.1 AGRICULTURE

5.1.1 ECONOMIC TRENDS

Despite the encroachments of urbanization and the problems that individual farmers may face, the industry as a whole is strong, and an important component in the economy of the planning area.

Although the amount of farm land in the planning area decreased by 31,000 hectares in the 10 years from 1961 to 1971, the agricultural industry has undergone change and been strengthened in some respects. Its future, as that of many industries, lies in larger, more highly mechanized units. For continued farm consolidation, good quality agricultural land needs to be available at prices that reflect its productive capacity.

5.1.2 SOIL RESOURCES

It is an objective of this plan that good quality farmland be conserved both because it is a non-renewable, productive resource and because its conservation is in the interests of those in the community whose occupation is farming. However, it is recognized that not every hectare of soil having good capability for agriculture can be reserved for farming. An expanding population will need housing, additional community facilities and new employment opportunities which in some cases can only reasonably be located on good agricultural soil. It is a purpose of this plan that this growth of the community take place with minimum encroachment on productive soils

and with full consideration of its impact on the regional farm industry.

Council recognizes that because of the shortage of sand and gravel deposits in the region, provision should be made for their extraction even where there is good agricultural soil. However extraction from good agricultural soil should be permitted only if the land is to be rehabilitated for agricultural use. In this regard the advice of the Ministry of Agriculture and Food will be sought.
[OPA #31, 27 DECEMBER, 1984, SECTION 5.1.2 IN PART]

The planning area occupies some 275,000 hectares of land of which about 40%, or approximately 110,000 hectares were not pre-empted by other uses as of 1971 and are rated as having high capability for agriculture.* In addition productive farming is possible on some soils with a lesser capability rating providing good soil management practices are followed. In fact some lesser quality soils may be better suited for agriclture than those that are rated better but which may be stony or poorly drained. Generally, the soils of lesser quality which are being farmed in the planning area are contiguous with areas of soils which have higher capability ratings. The areas of high capability soils are generalized on Map 28.

Some of the land which is rated highly is lying idle. Sometimes this occurs as a result of an expectation that it will be developed for other purposes. This problem is not unique to the planning area and attempts are being made elsewhere to find appropriate solutions.**

While this problem may not be able to be completely overcome, it can be considerably reduced if proposals for land development are publicized and consistently followed.

A further problem is that in some instances land may have been stripped of its topsoil or in other ways had its productive capability affected since the original soil surveys were undertaken. Such situations may require localized solutions, but should not be permitted to defeat the primary objective of maintaining contiguous areas of good agricultural soil for the production of food.

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*Lands designated as Class 1,2, or 3 on a scale of seven classes of soil capability for agriculture established by the ARDA Canada Land Inventory.

**The Province of Prince Edward Island, for example, through its resources management program is considering the technique of "minimum maintenance private land holdings". This approach would require owners of agricultural land to maintain or use their holdings according to standards based on soil capability.

5.1.3 OBJECTIVES

Therefore, policies for the agricultural resources of the planning area are based on the following objectives:

- avoiding depletion of productive farmland,
- ensuring that agriculture remains a valuable component of the regional economic base,
- providing maximum opportunity for individual farmers to operate profitably,
- maintaining and enhancing the rural way of life which has its roots in the land and its cultivation.

This plan cannot in itself achieve these objectives for the farming community. There are many factors beyond the control of the municipalities that together determine the economic and social context for farming and hence, how rewarding a way of life farming can be. The future success of the agriculture industry will depend largely on the implementation of policies and programs concerning such factors as farmland assessment, taxes, food marketing and pricing, farm credit, import tariffs, and the cost of good farmland, feed supplies, fuel, and machinery.

Although these measures are largely a responsibility of other governments, Council will work with representatives of the rural community to determine what actions the Region might take to improve the attractiveness of farming as an occupation in the planning area over the long term. Further, in order to provide a stable framework within which all agencies can work to achieve the objectives set out above, agricultural resource areas have been designated on Schedules "A" and "B". This designation is aimed at retaining as much farmland as possible with a high capability rating for agriculture where such farmland forms relatively extensive and contiguous areas, including other lands with a slightly lower capability rating.

5.1.4 PERMITTED LAND USES

It is intended that the agricultural resource areas designated on Schedules "A" and "B" be used principally for farming. Council is aware that there is a considerable range of opinion as to what activities and land uses are encompassed by the term "farming". Rural society is going through a period of fundamental change, not only in the planning area, but throughout Canada. As a result of this change, an increasing number of farmers appear to have lost either faith or interest in the long-term requirements of the farm industry and look to their land as a source of income, primarily from the creation of building lots to assist them and their families through difficult times. Farm organizations, government agencies concerned with farming, and those farmers who still have confidence in the future of farming as an occupation all tend to look at the land as a resource which must be preserved. In determing land use policies for the agricultural resource areas,

Council has attempted to provide for the changes which are occurring in rural society to an extent consistent with the perceived long-term interests of the farm industry.

Council therefore:

(1) Will assist representatives of the rural area municipalities and the farming industry to investigate what steps should be taken to further the long term viability of agriculture within the planning area.

(2) Designates agricultural resource areas on Schedules "A" and "B" which shall be used primarily for farming, including the residential accommodation requirements of the farming activity. Other land uses and activities considered appropriate in these areas are:

(i) forestry,

(ii) open space, conservation and open air recreation,

(iii) Industrial activities directly related to agriculture and which must necessarily locate in proximity to farm operations. [OPA #16, 14 JULY, 1981, SECTION 5.1.4. IN PART]

(iv) limited commercial development in accordance with the policies for rural commercial facilities set out in Section 2.5.4.4.6.

(v) limited non-farm residential development in accordance with the provisions for country lot development in agricultural resource areas set out in Section 2.4.2.7.

As indicated in Section 2.4.2.7.3, country lot development within the agricultural resource areas is intended to occur in locations where, because of local soil conditions or topography, the land cannot be farmed economically. However, Council considers the random scattering of non-farm housing throughout the agricultural resource areas, even if it is all located on pockets of poor land, not to be in the long-term interest of farming since non-farm housing interferes with farming. The problems which arise when non-farm houses are located in the midst of an active agricultural area include complaints from the non-farm residents about farm smells and from the farmers about harassment of livestock, damaged crops, open gates, damaged fences and the general unwillingness of the non-farm residents to maintain fences and drainage systems. Council therefore intends that this provision to permit limited non-farm

residential development within the agricultural resource areas be used to designate substantial pockets of poor lands and not small areas on individual farms.

(vi) on land which is unsuitable for sustained agricultural production, limited public and private institutional, educational (including a training and meeting centre) and community uses including associated residential uses providing such will not adversely affect the viability of the parent farm or adversely affect adjacent agricultural operations.

[OPA #25, APPROVED BY THE OMB, 13 OF MARCH, 1985 SECTION 5.1.4 (2)(vi) ALL]

(vii) quarries, including underground mining, on land which is unsuitable for sustained agricultural production,

(viii) pits, if a site is unsuitable for sustained agricultural production, or if a rehabilitation plan is prepared showing how the site can be rehabilitated suitable for productive agricultural use,

(ix) wayside pits and quarries, which if established on land suitable for sustained agricultural production shall be subject to a rehabilitation plan showing how the site can be rehabilitated suitable for productive agricultural use,

(x) once a pit, quarry, underground mine, wayside pit or wayside quarry has been exhausted and the licence has been surrendered uses may be permitted in accordance with policies (2) (i) to (2) (vi) except that local official plans may provide that space created by underground mining may be used also for industrial uses in accordance with policy 2(iv) of Section 5.5 subject, among any other requirements, to the satisfaction of any Regional concerns relating to waste disposal and to the provision of water, sewer, roads and public transport.

(3) In applying policy (2)(vi) Council shall seek the advice of the Ontario Ministry of Agriculture and Food when approving or considering local official plans, plans of subdivision, severances, and restricted area by-laws or amendments to one or more of them.

[OPA #25, APPROVED BY THE OMB,13 OF MARCH, 1985, SECTION 5.1.4(3) ALL]

(3) In applying policies (2)(vii) to 2(ix) Council shall seek the advice of the Ministry of Agriculture and Food when approving or considering local official plans, plans of

subdivision, severances, restricted area by-laws and site plans or amendments to one or more of them.

(4) Intends that local offficial plans of area municipalities shall permit extraction of categories 1, 2 or 3* of sand and gravel in accordance with the conditions of policy (2) (viii) and shall incorporate policy (2) (ix).

[OPA #31, 27 DECEMBER 1984, SECTION 5.1.4 (2) vii, viii, ix, x; (3), (4) ALL]

(5) Shall request that all new development within the agricultural resource areas designated on Schedules "A" and "B", shall conform with the environmental management policies contained in Section 5.6 of this plan.
[OPA #30, 16 MARCH, 1983, SECTION 5.1(3) IN PART]
[OPA #31, 27 DECEMBER, 1984, SECTION 5.1(5) IN PART]

(6) Council shall request the provincial government to enact legislation permitting area muncipalities to control the removal of topsoil.
[OPA #30, 16 MARCH, 1983, SECTION 5.1(4) IN PART]
[OPA #31, 27 DECEMBER, 1984, SECTION 5.1(6) IN PART]

5.2 MINERAL RESOURCES

5.2.1 Introduction

In the region the major mineral resources are limestone, sand and gravel. Mineral resources play an important role in to-day's society. They are used in a wide range of construction for houses, schools, shopping centres and factories, for road construction and repair; and for sewer and water pipes - to name just a few. They may be used in a relatively natural state such as for fill or for road base or they may be manufactured into materials used in the construction industry such as concrete, concrete products, asphalt or brick.

5.2.2 The Supply of Mineral Resources

The Ministry of Natural Resources has assessed the quality and quantity of limestone, sand and gravel in the region. However, not all this material is available for extraction because of existing land uses and other factors.

Reserves of limestone are estimated at 49.8 billion tonnes and have been classified into two grades of quality. The Class 1 material (that best suited for asphalt and concrete manufacture) comprises approximately 44.5 billion tonnes.

*as defined in the report "Aggregate Assessment of the Regional Municipality of Ottawa-Carleton, Ontario, Canada" by T.W. Fletcher and M.A. Klugman, 1979.

The reserves of sand and gravel are much less than those of limestone. They have been classified into four grades of which the top three satisfy different quality standards established by the Ministry of Transportation and Communications for the production of asphalt and concrete or as a road base. Reserves of these top three grades total 49 million tonnes - excluding reserves on Transport Canada land at the Ottawa International Airport.

5.2.3 Factors Affecting the Availability of the Mineral Deposits

Three factors, economic, environmental and the quality of material affect the ready availability of suitable material and hence which areas should be designated "Mineral Resource".

5.2.3.1 Economic Considerations

Transportation costs are a high proportion of the final cost of aggregate. To reduce costs, it is preferable that pits and quarries be established close to their major markets and the Ministry of Natural Resources notes that in the Ottawa area new limestone quarries (as distinct from the expansion of established ones) are generally being established no further than 14 kilometres* from the edge of the urban area. For sand and gravel, however, the limited availability of good quality material permits economic extraction at greater distances.

For quarries, a second economic consideration is the depth of surface material that has to be stripped away before the mineral resource is exposed. The Ministry of Natural Resources indicates that in Ottawa-Carleton it is usually not economic to remove more than 1.5** metres of surface material.

5.2.3.2 Environmental Considerations

The following environmental constraints were considered in identifying land to be designated "Mineral Resource":

- land designated Natural Environment Area, Marginal Resource Area (Restricted), Agricultural Resource Area or an area for urban development;
- land in the Ottawa and Rideau River Corridors;
- land in the Greenbelt;
- houses, approved residential subdivisions and land within villages.

*this figure is intended for information purposes and it is not to be construed that quarries should not be permitted beyond this distance.

**this figure is intended for information purposes and it is not to be construed that mineral extraction should not be permitted where the surface material exceeds 1.5 metres in depth.

5.2.3.3 **Quality of Material**

Because so much Class 1 limestone is potentially available, Class 2 areas need not as a general rule be designated. However, in order to minimize transportation costs some Class 2 limestone in the north-east part of the region has been designated as nearly all the adjacent Class 1 deposit is sterilised by environmental factors.

Because of the limited supply of the top three grades of sand and gravel all such deposits should be designated unless sterilised by environmental factors.

5.2.4 **Areas for "Mineral Resource" Designation**

As noted above, all the deposites of the top three grades of sand and gravel should be designated unless sterilised by environmental factors.

Of the limestone deposits that meet the criteria noted in sections 5.2.3.1, 5.2.3.2 and 5.2.3.3 not all need be made available at this time. In selecting which deposits to designate, four factors were considered together:

- areas within which there are existing pit or quarry licences,
- areas closer to the urban area,
- areas closer to provincial highways,
- the larger areas.

5.2.5 **Protection of Pits and Quarries not within "Mineral Resource Areas"**

Because existing extractive operations comprise a significant proportion of the future regional supply of aggregate it is important that they be fully utilized and not have their operation restricted by new development locating too close to them.

A second matter concerning the protection of pits and quarries relates to designating the area under licence in zoning by-laws. There are several advantages to this.

First, by designating pits and quarries they are given the status of a conforming use and hence if any on-site structures used in the extractive operations are destroyed they can be rebuilt and the operation continue.

Second, identifying them on a map assists the process of reviewing proposed adjacent developments described below.

Third, it serves as information to make would be purchasers of adjacent land aware of a licenced area if extraction has not yet commenced. This may act in deterring the establishment of incompatible uses nearby.

5.2.6 **Silica Sand**

Silica sand is a mineral whose principal uses in Canada area: sand in glass manfacture, foundry sand, smelter flux, the production of artificial abrasives and the manufacture of ferro-silicon. Reserves of lower grade sands from Ontario and Quebec can supply most of these industries, however, most of the higher grade sand required in the glass and foundry industries must be imported from the United States.

Six deposits of high grade silica sand have been identified in eastern Ontario. One is in Ottawa-Carleton, north-west of Harwood Plains in the City of Kanata (lot 20, Concession III). At the present time, the need to designate the particular deposit in Ottawa-Carleton vis-a-vis the five other locations in eastern Ontario is not clearly established, nevertheless any proposed development that would sterilise the deposit should be reviewed before deciding whether or not the development should proceed.

5.2.7 **Policies**

Council therefore:

1) Designates as "Mineral Resource Area" the areas shown on Schedules A and B.

2) Intends that in Mineral Resource Areas the following uses be permitted:

   - pits, quarries and underground mining*;
   - wayside pits and quarries;
   - farming;
   - forestry, and
   - other non-residential uses associated with the above provided they do not prevent the opening of a pit, quarry, wayside pit or quarry.

3) Intends that in Mineral Resource Areas once a pit, quarry, underground mine, wayside pit or wayside quarry has been exhausted and the licence has been surrendered, uses in addition to those listed in 2) may be permitted in accordance with policies (2) (iii) to (2) (v) of Section 5.5 (Marginal Resource Areas). Use of land according to this policy shall ensure that the possibility of mineral extraction from other lands designated Mineral Resource will not be limited.

4) Intends that in Mineral Resource Areas if technical information, having been reviewed by the Ministry of Natural Resources, demonstrates that the mineral resources of a particular site are not suitable for exploitation the site may be used in addition to uses listed in 2), in accordance with policies 2(iii) to 2(v) of Section 5.5 (Marginal Resource Areas) except where the Mineral Resource Area encompasses areas of organic soil which otherwise would be

*"underground mining" means mining horizontally into the rock from a quarry face without disturbing the ground above.

designated Environmental Constraint Area in which case the Environmental Constraint Area policies (Section 5.6.2) shall apply. Use of land according to this policy shall ensure that the possibility of mineral extraction from other lands designated Mineral Resource will not be limited.

5) When approving or considering local official plans, plans of subdivision, severances, restricted area by-laws, and site plans, or amendments to one or more of them, affecting land within a distance of 450 metres, in the case of limestone deposits, and 120 metres, in the case of sand and gravel deposits from the boundary of a Mineral Resource Area shall seek the advice of the Ministry of Natural Resources and the Ministry of the Environment to ensure the opportunity to extract minerals from the lands designated Mineral Resource will not be restricted.

6) When approving or considering local official plans, plans of subdivision, severances, restricted area by-laws, and site plans, or amendments to one or more of them, affecting land within a distance of 450 metres of the licenced area of a quarry or wayside quarry, or 120 metres of the licenced area of a pit or wayside pit, shall seek the advice of the Ministry of the Environment to ensure the method of extraction and the ultimate extent of the extractive operation will not be restricted.

7) Intends that the licenced area of pits and quarries (including wayside pits and quarries), shall be zoned for extraction in restricted area by-laws except in areas designated Natural Environment Area, Marginal Resource Area (Restricted), Special Policy Area and areas designated with the suffix "(River Corridor)". Such zoning may not be required for licenced areas which the Ministry of Natural Resources advises are of minor resource value by virtue of the amount of material available for extraction.

8) Intends that local official plans of area municipaltiies shall incorporate policies (1) and (2) above but that policies may be established which require an amendment to a restricted area by-law prior to the establishment of a pit or quarry.

9) Intends that notwithstanding policies elsewhere in this Plan, where quarry faces exist as of the date of adoption of this policy by Regional Council, underground mining may be permitted including the utilization of space created by such mining, subject, among any other requirements, to the satisfaction of any Regional concerns relating to waste disposal and to the provision of water, sewer, roads and public transport.

10) When approving or considering local official plans, plans of subdivision, severances, restricted area by-laws, and site plans, or amendments to one or more of them, affecting land within a distance of 450 metres of lot 20, Concession III, City of Kanata, intends that notwithstanding the Marginal Resource Area designation, to seek the advice of the Ministry of Natural Resources in determining whether or not the proposal should be permitted having regard to the importance of the silica sand deposit on the property vis-à-vis other deposits in eastern Ontario.

11) Intends not later than ten years from the adoption of these policies to consider whether additional areas should be designated Mineral Resource."

[OPA #31, 27 DECEMBER, 1984 SECTION 5.2 ALL]

5.3 NATURAL ENVIRONMENT AREAS

5.3.1 INTRODUCTION

Ottawa-Carleton contains a range of vegetation, topographic, wildlife and geological characteristics within its boundaries with these features often occupying the same geographical area or being contiguous with one another. The objecctives for maintaining such features or areas, not all necessarily applying in all cases, are:

- to preserve areas for wildlife;
- to preserve areas of scientific or educational value;
- to preserve areas of botanical interest;
- to preserve areas of scenic value;
- to set aside land for forestry purposes; and
- to preserve water supplies and wetlands.

The natural environment areas identified on Schedules A and B are not necessarily all those that should be protected, but they are the most important ones within the planning area. Area municipalities may make designations of additional areas of local significance in their official plans.

In identifying those areas designated on Schedules A and B as natural environment, the Region commissioned two major studies[1] and in addition utilized advice from several other sources - notably that from the Conservation Authorities, the Ministry of Natural Resources and the Ottawa Field Naturalists' Club.

The designation of land as a natural environment area is intended to protect the area and does not mean the land is available for public use. Use by the public is only permitted where land is publicly acquired. Such land will be the subject of management plans which will set out what types of

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[1] Reed, Dr. Robert M., An Ecological Study of Conservation-Recreation Areas in the Regional Municipality of Ottawa-Carleton (2 reports) University of Ottawa 1975 and 1976.

activities will be provided for. Management plans will be prepared with consideration for the interests of private owners of adjacent lands. Where land is not publicly acquired, permission for access is at the discretion of the owner. The use of land in the natural environment areas wil be governed by the policies established in Section 5.3.5.

[OPA #12, 22 AUGUST, 1983 SECTION 5.3.1 ALL]

5.3.2 **Land Acquisition**

In order to achieve the objectives for the natural environment areas as stated in Section 5.3.1 land acquisition will be required in order to preserve these areas. However many landowners do not wish to dispose of their property and acquisition will be pursued only if the owner is interested in selling.

The policies for acquisition are set out in Section 5.3.5.

[OPA #12, 22 AUGUST, 1983 SECTION 5.3.2 ALL]

5.3.3 **Public Works**

Council recognizes that some public works may have an adverse impact on natural environment areas either from the construction of the works or from their subsequent use. At the same time it recognizes that some public works may be required in order to ensure proper management of these areas. Council's intent is to prohibit the former and to permit the latter.

Under the Planning Act, public works may be controlled through an official plan if they fall within the jurisdiction of a council or a local board. Such public works are the subject of policies in Section 5.3.5.

For public works not controlled by this official plan council intends to have regard for the objectives for the natural environment areas as set out in Section 5.3.1 when providing comments on the work proposed.
[OPA #12, 22 AUGUST, 1983 SECTION 5.3.3 ALL]

5.3.4 **Geomorphic, Geological and Landscape Features**

In addition to the natural environment areas there are throughout the planning area other types of natural feature which warrant special consideration.

In 1975 the Regional Municipality and the Ministry of Natural Resources undertook a survey of the planning area to identify geomorphic and geological features whose preservation is desirable. These are shown on Schedules A and B. The objective is that sufficient of each feature should be preserved so that its characteristics can still be observed.

Other features which are valuable elements of the landscape should be protected. These may, for example, be points from which excellent views of the surrounding countryside can be obtained or conversely be themselves significant visual components of the rural scene. Excellent examples in this latter regard are the several escarpments in the Orleans and Cumberland area. In order that the landscape value of these escarpments is not impaired, two concerns are paramount to keep the scarp face free from development

including quarrying, and to ensure that any development above the escarpment is set back so as not to be visible from below. It is intended that protection be appropriate to the different characteristics of each situation. The question of landscape protection in general is discussed in Section 5.6.3.

[OPA #12, 22 AUGUST, 1983 SECTION 5.3.4 ALL]

5.3.5 **Conservation Area (Urban)**

Within the outer limit of the greenbelt are certain areas of publicly owned land which for varying reasons are of environmental significance. These areas and their most significant features include:

- Britannia woods, pond and shoreline - which has a large diversity of habitat type accounting for both a wide variety and large number of birds, herptiles and other forms of wildlife;

- the shoreline and cliffs of Rockcliffe Park - the shoreline and adjacent limestone cliffs support 30 known significant species of plants and a breeding colony of the Northern Two-lined Salamander.

- Rockcliffe Airbase woods - which is a relatively undisturbed forest community with several significant or unusual plant species (e.g. Shagbark Hickory, Bitternut Hickory); and

The importance of protecting these areas relates both to their significant environmental features and to their relative proximity to the urban centre which make them accessible to a large number of potential users.

Since such lands are already in public ownership there is not the same need to make provision for limited development or use as Council feels is desirable for land in private ownership. The types of permitted uses are restricted to those that will not significantly affect the natural environment. Due to their proximity to a large population restrictions on use may in fact be a necessary consideration in the management of these areas to ensure protection of their sensitive features.

Development should be limited to anything necessary in the interests of conservation. As such, the construction of recreational facilities would generally not be in keeping with the intent of this designation.

[OPA #20, MODIFIED AND APPROVED BY THE MINISTER, 30 DECEMBER, 1985 SECTION 5.3.5 ALL]

5.3.6 **Policies**

Council therefore:

1. designates as natural environment area the areas shown on Schedules A and B.

2. intends that in natural environment areas the following may be permitted:

   i) a single family dwelling and accessory buildings on each lot existing and fronting on a public road which is maintained all year round,

   ii) farming, including the residential accommodation requirements of the farming activity,

   iii) forestry purposes as defined in the Forestry Act, R.S.O. 1980,

   iv) recreational uses which do not adversely affect the natural characteristics of the environment,

   v) uses that will assist in conserving or managing water supplies, wildlife or other natural characteristics,

   vi) uses which will utilize the natural characteristics of these areas for scientific or educational purposes,

3. intends that in natural environment areas:

   i) to advertise that it is prepared to acquire land if the landowner wishes to sell,

   ii) at the request of the landowner to negotiate a price but if after a period of six months an agreement has not been reached, with the concurrence of the landowner, to have the price determined in accordance with The Expropriations Act, or alternatively,

   iii) at the request of the landowner to acquire the property through expropriation in accordance with The Expropriations Act,

   iv) not to acqure improvements unless requested by the landowner,

   v) to be prepared to buy a part of a property providing that the size of the part not acquired satisfies the requirements of the area municipality.

4) intends that in natural environment areas:

   i) to place land it acquires under its management agreement with the Ministry of Natural Resources. However should some other management arrangement be proposed and such were considered feasible and desirable by Council such could be considered,

ii) to establish local advisory committees to review the management program developed by the Ministry of Natural Resources which may advise the Council and Regional Planning Committee accordingly, after consultation with interested parties. The terms of reference for such committees shall be established, as required,

iii) to consult with the Ministry of Natural Resources in order to achieve the following management practices on land it owns:

- recreational uses should be established only after a management plan has been prepared in conjunction with the committees noted in 4ii),
- land should be developed for public use only if it has access from an open right-of-way or from other public land itself having such access,
- boundary markers should be placed at the four corners of property owned by the Region,
- land may be leased to another party for a specified purpose having regard for the interests of adjacent landowners, the physical features on the property and Council's objectives as stated in Section 5.3.1.

iv) to continue to pay full grants in lieu of taxes to area municipalities on lands acquired, with such grants being at the municipal residential mill rate,

v) to be prepared to entertain requests from area municipalities for grants to cover additional municipal costs demonstrated to result from the use or management of Regional Land in the Natural Environment Areas.

5. intends that where Environmental Constraint Areas occur within natural environment areas the policies of Section 5.6.2 shall apply also.

6. intends that, any public work (as defined by the Planning Act) within the natural environment areas or conservation areas (urban) shall not be constructed until it has been the subject of an environmental impact study undertaken jointly by the proponent and the Council to determine the environmental impacts of the proposal and to recommend whether the project should be undertaken, and if so, under what conditions.

7. intends that for public works not within the purview of the Planning Act to have regard for the objectives for the natural environment areas as set out in Section 5.3.1 when providing comments on the work proposed. Council will similarily have regard for the environmental features of the Conservation Areas (Urban) as described in Section 5.3.5.

8. intends that when approving or considering local official plans, plans of subdivision, severances, restricted area by-laws and site plans or amendments to one or more of them, will in addition to the above policies, have regard for the objectives for geomorphic, geological and landscape features as stated in Section 5.3.4.

[OPA #12, 22 AUGUST, 1983 SECTION 5.3.2 ALL]

9. intends in Conservation Areas (Urban) policies 2(v) and 2(vi) will apply and in addition recreational uses that make use of and do not detract from the environment of the location in question will be permitted.

[OPA #20, MODIFIED AND APPROVED BY THE MINISTER, 30 DECEMBER, 1985 SECTION 5.3.6 PART]

5.4 RIVER CORRIDORS

5.4.1 INTRODUCTION

The Rideau and Ottawa Rivers and the diverse characteristics of topography, land uses, and buildings both along the shorelines and in their general vicinity comprise an inter-relationship of human activity, scenery, history and recreational opportunity that demands these corridors be each treated as comprehensive units in the formulation of planning strategy. They display a variety of views and activities throughout their length which, although not of uniform intensity, is nevertheless sufficiently distinct to set them apart from the rest of the planning area. A voyage down these rivers reveals a passing scene of bays and beaches, cliffs of rock and cliffs of earth, cultivated fields and wild areas, woodland and brush, grass and marsh, islands and bridges, large urbanized areas, recreational developments, clusters of habitation, and isolated buildings. This kaleidoscope, while being the main reason for the charm and attraction of these two rivers, is at the same time part of the source of existing and potential causes for concern. If too many activities of differing characteristics compete for limited space, the result can only be a downgrading of the environment to the detriment of all unless sound measures are taken.

5.4.2 THE RIVERS AS RESOURCES

The significance of the Rideau and the Ottawa Rivers must be viewed, not just within the context of the planning area and any localized land use needs and conflicts, but also within a broader provincial and national perspective. In this regard both have a historical and recreational importance that must always be considered in the development of planning policy.

The Rideau in the planning area is part of the canal and river system joining Kingston with Ottawa. The canal was built between 1826 and 1832 as an alternative supply route to the St. Lawrence between Montreal and Kingston. No fortifications were ever constructed in the planning area and the only structures of interest directly associated with the

canal are the seventeen locks which are at six different locations. There are also numerous buildings of historical interest along the banks. The present significance of the Rideau, in addition to the fact that it provides the natural drainage for much of the planning area, lies in its recreational use. During the summer months it is heavily used for boating both for long distance trips and for local cruising. Between 1948 and 1969 the use of the locks increased an average of 7% annually. Associated with boating are such developments as marinas and boat launching areas. In addition to boating, the Rideau also offers opportunities for shore-based recreation and there are public and private camp grounds as well as picnic areas at points on or near the shore. Although not all the shoreline is rated highly for recreation, those other stretches with their marshy or rocky areas add to the scenic variety. From the scenic consideration alone, the Rideau is a valuable asset with ever-changing views being obtainable from the roads that flank it on both sides.

The Ottawa River played an important part in Canada's early history as it was part of the highway of the explorer, missionary and fur trader to the west. No evidence of this period has been left in the planning area but there are several buildings near its shores that recall early nineteenth-century settlement. As for the Rideau, the Ottawa's significance is mainly its recreational suitability both for boating and for shore-based activities. Its scenic variety is not as readily appreciable, as outside the City of Ottawa no roads run along its shoreline with the exception of relatively short stretches of Highway 17.

5.4.3 RIVER CORRIDORS STUDY

In order to protect and capitalise on the assets of the Ottawa and Rideau River corridors it is necessary for them to be subject to special policies. In order to develop these policies a detailed study of the river corridors has been undertaken.[1] This study established four primary objectives for the river corridors as well as two supportive objectives, which are considered as fundamental prerequisites to achieving the other four.

It is recognized that achieving the objectives outlined below will involve different levels of government and different agencies. It is not the intent of this official plan to determine the relative responsibilities between the different agencies in achieving the objectives.

Primary Objectives

Recreation

To recognize a range of suitable recreational opportunities.

[1] Planning Department, Regional Municipality of Ottawa-Carleton, Ottawa and Rideau Rivers and Shores in Ottawa-Carleton, 1978.

Conservation

To conserve those natural areas that are of significance from a fish, wildlife, botanical or geological standpoint.

Heritage

To protect, interpret and restore those elements that depict the heritage of the waterways.

Aesthetics

To maintain and improve the scenic value of the river corridors by conserving elements that form important components of the landscape and by preventing actions that would have a deleterious effect

Supportive Objectives
Water Conditions

To ensure that suitable water conditions are attained in order to help achieve the primary objectives.

Control over Development

To ensure a suitable location, type, density, layout and appearance of new development that is in accord with the primary objectives.

The policies needed to achieve the above objectives cannot all be achieved through the means of an official plan and as such some policies are contained in documents which accompany but which are not part of this plan.[1]

[OPA #20, APPROVED BY THE OMB, 7 AUGUST 1985, SECTION 5.4.3 PART]

Because of the above objectives and the significance which Council attaches to the river corridors there is need for special policies to be applied. These policies are different to a certain extent from policies that apply to land outside the river corridors and relate to the following elements:

- land designations
- scenic routes
- site planning
- location of land dedicated for public purposes
- land acquisition.

In order to indicate generally where the river corridor policies apply, a "River Corridor" designation is shown overlaying other designations on Schedules A and B, although as explained below the special policies do not apply in the same manner to all the designations.

[OPA #20, 18 JULY, 1983 SECTION 5.4.3. ALL]

[1]Regional Municipality of Ottawa-Carleton, Operational Policies - Ottawa and Rideau River Corridors and Land Acquisition and Management - Ottawa and Rideau River Corridors.

5.4.4 LAND DESIGNATIONS

Having regard for the recreation, conservation, heritage and aesthetic objectives for the river corridors, Council regards it necessary that for some areas in the corridors there be special designations and that in certain others, policies be modified from those that apply to designations outside the river corridors.

Marginal Resource Area (River Corridor)

Within the river corridors, and particularly in the Ottawa River west corridor, are areas of land having no specific recreational, conservation or agricultural potential. Elsewhere in the region, such lands are designated marginal resource area. In marginal resource areas; farming, forestry, open air recreation, limited country lot development, pits and quarries, any type of commercial development and rural industries are permitted under the current provisions of this plan.

In the river corridors in order to help preserve the natural landscape and visual attractiveness pits, quarries and industrial development are not to be permitted and commercial development shall be of a recreational nature or serve the traveller.

Council therefore:

intends that in areas designated marginal resource area (river corridor) the following may be permitted subject to policies in Sections 5.4.6 and 5.4.7;

- forestry;
- farming (including the residential accommodation requirements of the farming activity);
- uses that will assist in conserving or managing water supplies, fish, wildlife or other natural characteristics or features;
- open space and open air recreation that makes use of and does not adversely affect the natural environment;
- tourist developments;
- commercial uses that are related to recreational activities which make use of the water or which serve the needs of the traveller; and
- limited non-farm residential development in accordance with provisions for country lot development in marginal resource areas set out in Section 2.4.2.7.

Agricultural Resource Area (River Corridor)

Outside the river corridors, the designation of land as Agricultural Resource Area is intended to protect agricultural lands rated 1, 2 or 3 by the Canada Land Inventory together with other contiguous land being used for farming. In addition to agriculture; forestry, open air recreation, pits, quarries, commer-

cial and industrial activities directly related to agriculture are permitted as is non-farm residential development where large pockets of poor land exist.

In the river corridors pits and quarries and industrial development should not be permitted. Having regard for the desirability of protecting agricultural land, commercial/recreational development shall be permitted only if such requires water access or a waterfront location (e.g. beach-parks, marinas, waterfront campgrounds). It is considered that these uses are sufficiently important for the achievement of the recreational objective expressed in Section 5.4.3 that they should be permitted even if this removes agricultural land from production. The amount of such development is expected to be very small.

There are some small parcels of land designated agricultural resource (river corridor) between the river and adjacent road. Such parcels should be eligible for development in accordance with the policies for marginal resource areas (river corridor) if evidence is provided by the Ontario Ministry of Agriculture and Food that the parcel is comprised of soils other than class 1, 2 and 3 (ARDA) or that the parcel is so small, so dissected by gullies, or so affected by other constraints that the subject land could not provide for sustained agricultural production on a commercial basis, or could not materially contribute to agricultural operations on adjacent land. Under no circumstances however should the development of the parcel reduce the economic viability of a parent farm or adversely affect adjacent farm operations. Nearly all such parcels occur in the Rideau River corridor between the river and Regional Roads 13 and 19.

It should be emphasized that development of these small agricultural parcels should only occur in accordance with the same conditions that apply to development in the marginal resource areas (river corridor). The policies of this plan do not permit development in agricultural areas which would not be permitted in marginal resource areas.

Council therefore:

intends that in areas designated agricultural resource area (river corridor) the following be permitted subject to policies in Sections 5.4.6 and 5.4.7:

- forestry;
- farming (including the residential accommodation requirements of the farming activity);
- uses that will assist in conserving or managing water supplies, fish, wildlife, or other natural characteristics or features;
- open space and open air recreation that requires water access or a waterfront location; and
- on land which is unsuitable for sustained agricultural production all of those uses permitted in accordance with the policies for

marginal resource area (river corridor), provided such uses will not adversely affect the viability of the parent farm or adversely affect adjacent agricultural operations. It is intended that this special consideration only be given to those small parcels of agricultural land along the Rideau River which lie between the river and Regional Roads 13 and 19. In applying this policy Council shall seek the advice of the Ontario Ministry of Agriculture and Food when approving or considering local official plans, plans of subdivisions, severances, and restricted area by-laws, or amendments to one or more of them.

- In addition and notwithstanding any other requirements of this plan, in the part of the river corridor bounded by Regional Roads 8 and 19, lying within lot 30, Broken Front Concession (R.F.) City of Gloucester, in view of the nature, type and location of this parcel of land, residential development shall be permitted on the basis of net density of one unit per 0.2 hectares.

[OPA #28, 10 MARCH, 1983 SECTION 5.4.4 IN PART]

Waterfront Open Space

Inside the greenbelt, a large proportion of the riverfront land (approximately 70%) is in public ownership and much of this land has been developed to some extent to provide for passive recreational use (e.g. the foot and bicycle paths along the Ottawa River).

All of the river corridor lands which are in public ownership and are either currently developed for recreation, or which should be so developed, are designated Waterfront Open Space.

It is important that waterfront open space lands are maintained for outdoor recreation and are not adversely affected by surrounding uses. However, these areas could be used more intensively providing that, overall, their open and natural state is maintained. With this in mind they could be developed with additional facilities.

Council therefore:

intends that in areas designated Waterfront Open Space:

(i) the following uses be permitted:

- active recreation uses that require water access or a waterfront location such as beaches, boat launching and boat mooring facilities;

- passive recreational uses such as walking, hiking, bicycling and cross country skiing.

(ii) to encourage the appropriate agencies to provide the uses listed in (i);

(iii) the designation is not to determine whether new roads (parkways) will be built. Schedule C of the Regional Plan shows the Region's intent with respect to existing and proposed roads.

Recreation Area

The report "Land Acquisition and Management - Ottawa and Rideau River Corridors" indicates the desirability of providing additional water access areas and recommends certain sites for acquisition. However in order to separate the question of designation from the question of acquisition as was done in the policies towards natural environment areas[1] it is preferable that acquisition areas not be specifically delimited in the official plan. Policies are however needed to ensure that such areas are protected prior to acquisition.

Having regard to water access opportunities outside the greenbelt it is important that areas used now for recreation and access should not be lost to other uses even though they do not necessarily possess the most suitable of physical conditions. However in selecting new areas the physical suitability of a location is the most important consideration.

The land acquisition report describes the procedures to be followed concerning the public acquisition or private recreational development of the future recreation areas; and for the existing recreation areas no acquisition is required providing they remain in recreation use. The areas are designated with a symbol on Schedules A and B and the policies are described below. In interpreting the extent of land to which the symbol refers reference should be made to the maps in Appendix 1 of the land acquisition report.[2]

Council therefore:

Intends that in areas designated Recreation Area:

(i) . present uses be permitted to continue and where there are existing recreational uses these may expand;

. areas proposed for future recreational use be subject to the acquisition policies contained separately[1] which also make provision for privately sponsored recreational developments;

(ii) the extent of the area subject to the designation be interpreted by reference to maps as part of the acquisition policies contained separately[2].

[OPA #20, APPROVED BY THE OMB, 7 AUGUST, 1985 SECTION 5.4.4 PART]

1. Amendment No. 12 to the Official Plan for the Ottawa Carleton Planning Area.

2. Regional Municipality of Ottawa-Carleton, Land Acquisition and Management - Ottawa and Rideau River Corridors.

Special Policy Area 1 (Petrie Island)

Petrie Island consists of a group of inter-connected sand spits, wooded in places, which are partly flooded each spring. A sand dredging operation which extracts sand from the bed of the Ottawa River is located on the east part of the island. The west part of the island is in more of a natural state and within it are to be found areas of hackberry tree - a tree rare to the region.

The water quality of the Ottawa River at this location is not suitable for swimming at this time. However this may improve once the Templeton sewage treatment plant is operational. Notwithstanding this and having regard to its proximity to the East Urban Community and the shortage of facilities in the Ottawa East corridor, Petrie Island is an area suitable for acquisition. Most of the island is in one ownership and part or all of the island should be acquired in the long term. If the owner wishes to retain part of the island this could be considered at time of acquisition. Development of the island could include private recreational development. The exact nature of the development to be permitted will be determined in conjunction with the area municipality.

Council therefore:

intends that in the area designated special policy area 1:

- existing uses may continue but the sand extraction operation should not expand onto more of the island than it now occupies;
- in the longer term part (or all) of the island should be either publicly acquired for recreation or privately developed for same subject to the policies on private development of recreation areas contained in the land acquisition and management report;[1]
- whether a public beach should be developed should depend on the water quality improving to meet provincial standards for swimming;
- any future use of the island shall ensure adequate protection of the hackberry woods and adjacent waterfowl area.

[OPA #20, APPROVED BY THE OMB, 7 AUGUST, 1985 SECTION 5.4.4 PART]

Special Policy Area 2 (Uplands Sand Pits)

The report "Ottawa and Rideau Rivers and Shores in Ottawa-Carleton"[2] proposed that the whole Uplands Sand Pits area be designated for future recreation. However, as a result of the redefinition of the Regional recreational interest, much of the backland is not an essential recreational component. Field work has confirmed that the northerly part of the shoreline has potential for the future development of

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[1]Regional Municipality of Ottawa-Carleton, Land Acquisition and Management - Ottawa and Rideau River Corridors

[2]Planning Department, Regional Municipality of Ottawa-Carleton, Ottawa and Rideau Rivers and Shores in Ottawa-Carleton 1978

a public beach. Further, a certain amount of land will be required for an open space link that is recommended to connect the existing urban area with the South Urban Community.

It is not immediately evident what use should be made of the remaining land. The matter of selecting an appropriate use is made difficult by the presence of the Ottawa International Airport. Residential development is not appropriate for most of the area considering the airport noise and certain industrial uses could prejudice the Region's recreational interests (e.g. impact of water pollution on the future beach).

In light of these problems, the entire area is designated as a special policy area. The Region's main interest will be to prevent any land use which would adversely affect the river or prejudice the recreational value of the riverfront lands and the open space link. The final decision as to how the lands should be used will await resolution with the City of Ottawa.[1]

Council therefore:

intends that in the area designated special policy area 2:

- the Region's main interest will be to prevent any land use which would adversely affect the river or prejudice the recreational value of the riverfront lands. The resolution of how the land should be used should await resolution with the City of Ottawa.

- existing uses may continue

Other Policy Designations

Since there is no difference in policy, except as noted below, between land in and outside the river corridor in the following designations, Council intends that in areas designated:

(i) General location of South Nepean and South Gloucester parts of South Urban Community (river corridor);

(i) Environmental constraint area (river corridor);

(ii) Village (river corridor),

the same policies apply as to the corresponding categories of designation without the suffix "(river corridor)" that appear elsewhere in this plan except that designations (i), above be subject to the policies contained in Sections 5.4.6 and 5.4.7 and designation (ii) above be subject to the policies of Section 5.4.7.

[OPA #20, 18 JULY, 1983 SECTION 5.4.4 ALL]
[OPA #20, MODIFIED AND APPROVED BY THE MINISTER 30 DECEMBER, 1985 SECTION 5.4.4 PART]

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[1]The City of Ottawa has prepared a preliminary concept plan for the Uplands-River Road area - which plan should be finalized in 1981.

5.4.5 **SCENIC ROUTES**

For the most part, the Ottawa and Rideau Rivers are flanked by major roads which follow the rivers close to their shores. These roads are an integral part of the river corridors since they give access to the various recreational facilities along the rivers. These roads can also operate as tourist routes for people visiting the National Capital and, on a more local scale, they provide scenic viewing opportunities for recreational drivers. These roads are, therefore, an important resource and deserve special consideration in the context of the river corridors. They relate in particular to the recreation and aesthetic objectives for the river corridors and as such warrant special recognition.

In identifying the most suitable scenic routes, consideration was given to three aspects:

- the relative directness of the route - i.e. to provide routes to the capital which can easily be followed by visitors to the region;

- the proximity of the routes to the rivers - i.e. to provide convenient access to the rivers and their associated recreational features; and

- the scenic qualities of the routes - i.e. to provide pleasant views of the water and attractive landscape features.

Council therefore:

designates as Scenic Routes the roads identified on Schdule F and supplementary to this official plan willl adopt policies concerning their promotion.

[OPA #20, 18 JULY, 1983 SECTION 5.4.5 ALL]

[OPA #20, APPROVED BY THE OMB, 7 AUGUST, 1985 SECTION 5.4.5 PART]

[OPA #20, MODIFIED AND APPROVED BY THE MINISTER, 30 DECEMBER, 1985, SECTION 5.4.5 PART]

5.4.6 **SITE PLANNING**

Site planning administration rests with the area municipalities who will have regard for the aesthetic qualities and scenic values of the river corridors and scenic routes. Council will have similar regard when approving plans of subdivision.

[OPA #20, 18 JULY, 1983 SECTION 5.4.6 ALL]

5.4.7 **LOCATION OF LANDS DEDICATED FOR PUBLIC PURPOSES**

With respect to providing access to the water, an opportunity exists through the design of subdivisions to provide public lands at the shoreline. The dedication of such land at the time of subdivision can provide small areas of open space, though not enough to accommodate widespread public use. Nevertheless, this is a means by which all residents of a subdivision - where only some lots have shoreline frontage - can be provided with access to the water, and because of this, the dedicated land should be

located at the water's edge with access from a public road, unless there are compelling reasons otherwise. This approach should apply to all land designations where a proposed subdivision abuts the river's shorelines.

Council therefore:

When approving plans of subdivision applications for land abutting the shoreline in the river corridors will require the lands dedicated for public purposes be located at the shoreline and be accessible from a public road unless there are compelling reasons to the contrary.

[OPA #20, 18 JULY, 1983, SECTION 5.4.7 ALL]

5.4.8 **LAND ACQUISITION**

Council recognizes that in order to fully achieve the objectives for the river corridors selective land acquisition will be required. Council also recognizes that besides itself other agencies have authority in this field and should be encouraged to become involved in acquisition, development or maintenance of new areas and/or facilities.

Through the policy for "Recreation Area" in Section 5.4.4 a designation is established whereby areas suitable for acquisition can be protected from being developed but Council recognizes that additional policies outside the sphere of an official plan are also required and such should be the subject of a separate policy document.

Council therefore:

- Will adopt policies, as may be amended from time to time, pertinent to the acquisition and management of river corridor lands with such policies to be read in conjunction with but not to form part of this official plan.

- In addition to areas designated "Recreation Area" be prepared to consider acquisition of other areas in the river corridors as may be suggested from time to time having regard to the nature and location of the property, the uses to which it could be put, the funds available and establishing responsibilities for its development and maintenance."

[OPA #20, APPROVED BY THE OMB,7 AUGUST, 1985 SECTION 5.4.8 ALL]

5.5 **MARGINAL RESOURCE AREAS**

There are relatively extensive areas in the region whose physical features offer only limited potential or capability for resource development. The soils in these areas for the most part have limitations that restrict their potential for productive farming or forestry although there are pockets of good land which support good farm and woodlot operations. Some of the marginal resource areas near the urban areas

designated on Schedules "A" and "B" might conceivably be used for urban development beyond the planning period.

Most of the marginal resource lands identified on Schedule "A" lie within West Carleton and Goulbourn Townships where extensive formations of limestone bedrock lie near the surface and, in fact, exposed rock is found frequently. These area of limestone do not generally support commercially productive agriculture or forestry. Neither are they very suitable for residential development on private services because of the very shallow soils overlying the bedrock. The commercial value of this limestone resource is undetermined at this time although parts of the area have been designated as mineral resource areas pending completion of a detailed investigation of the aggregate resources in the planning area (see Section 5.2).

Much of these areas is well-treed but considerable clearing has taken place in parts and reforestration would be a beneficial practice in these areas. It would help restore soil cover and create the potential for private recreational uses and possibly even small-scale commercial woodlot operations in the most favourable locations. In this regard, private land owners are encouraged to undertake individual reforestration projects under the provisions of the Woodlands Improvement Program which is managed by the Ontario Ministry of Natural Resources.

Although their commercial resource value is limited, these marginal lands complement the rural area by providing stretches of open countryside between areas of more intensive use; natural habitats for bird, animal, and plant life; areas for outdoor recreation; and opportunities for those wishing to farm on a limited scale as well as those seeking residential sites for rural living. Throughout these areas of marginal resource potential, there are locations which, because of soil conditions, attractive landscape, and proximity to community facilities, are suitable for limited amounts of housing on relatively large lots. Council has provided for limited country lot development in the marginal resource areas in Section 2.4.2.7 of this plan.

It is Council's intention that, with the exception of areas designated for country lot development in local official plans in accordance with Section 2.4.2.7 of this plan, marginal resource areas remain essentially in their present state, although the expansion of farming and woodlot operations in these areas is encouraged. In addition, limited industrial and commercial development which is complementary to the rural community is also provided for on a restricted basis within these areas in accordance with Section 2.5.4.2 and Section 2.5.4.4.6 respectively.
[OMB ORDER, NO.22, 11 OCTOBER, 1979, SECTON 5.5 IN PART]

Council recognizes that some areas because of their natural features require land use and development policies which are more limited than those otherwise appropriate for marginal resource areas. These areas have been designated mariginal resource area (restricted) with the following objectives:

- to protect areas for wildlife;
- to protect areas of scientific or educational value;
- to protect areas of botanical interest;
- to protect areas of scenic value;
- to set aside land for forestry purposes; and
- to protect water supplies and wetlands.

Lands designated marginal resource area (restricted) are intended for the preservation of the natural land and environment primarily through private ownership.

[OPA #12, 22 AUGUST, 1983 SECTION 5.5 IN PART]

In summary, Council proposes that:

(1) The lands designated marginal resource areas and marginal resource areas (restricted) on Schedule "A" shall remain essentially in their present state.

[OPA #12, 22 AUGUST, 1983 SECTION 5.5 IN PART]

(2) Land uses and activities considered appropriate in marginal resources areas are:

[OPA #12, 22 AUGUST, 1983, SECTION 5.5 IN PART]

(i) farming, including the residential accommodation requirements of the farming activity,

(ii) forestry,

(iii) open space, conservation, and open air recreation,

iv) limited industrial development in accordance with the rural industry policies, in Section 2.5.4.2,
[OMB ORDER, NO. 22, 11 OCTOBER, 1979, SECTION 5.5(2) (iv) IN PART]

(v) limited commercial development in accordance with the policies for rural commercial facilities set out in Section 2.5.4.4.6,

(vi) limited non-farm residential development in accordance with the provisions for country lot development in marginal resource areas set out in Section 2.4.2.7.

(vii) limited public and private institutional educational (including a training and meeting centre) and community uses including associated residential uses.

[OPA #25 APPROVED BY THE OMB 13 MARCH, 1985, SECTION 5.5(2)(vii) ALL]

(viii) pits and quarries, including underground mining,

(ix) wayside pits and quarries,

(x) once a pit, quarry, underground mine, wayside pit or wayside quarry has been exhausted and the licence has been surrendered, uses may be permtted in accordance with policies (2) (i) to (2) (vii).

(xi) local official plans of area municipalities shall permit wayside pits and quarries and extraction of categories 1, 2 or 3* of sand and gravel.

[OPA #31, 27 DECEMBER 1984, SECTION 5.5 (2) viii, ix, x, xi, ALL]

3(a) Land uses, activities and other policies considered appropriate for marginal resource areas (restricted) are:

(i) farming, including the residential accommodation requirements of the farming activity;

(ii) forestry;

(iii) recreational uses which do not adversely affect the natural characteristics of the environment;

(iv) uses that will assist in conserving or managing water supplies, wildlife or other natural characteristics;

(v) uses which will utilize the natural characteristics of these areas for scientific or educational purposes;

(vi) a single family dwelling and accessory buildings on each lot existing and fronting on a public road;

(vii) Country lot residential development in accordance with Section 2.4.2.7 provided that any application for such development be accompanied by appropriate studies that demonstrate that the development;

(a) will not adversely affect public health and safety, that is, will not pollute ground water, will not result in the development of hazard lands, and will be located away from incompatible areas,

(b) has a proven availability of an adequate quality and quantity of ground water for private wells, and in particular, has a minimum flow of 3 gallons per minute for each lot,

*as defined in the report "Aggregate Assessment of the Regional Municipality of Ottawa-Carleton, Ontario, Canada," by T.W. Fletcher and M.A. Klugman, 1979.

(c) will cause no adverse impact both on and off the site on such matters as deer, waterfowl, features of botanical significance, wetlands, forestry resources or scenic attributes. The appropriate studies required in this policy shall be carried out by persons qualified in the particular disciplines affected, and

(d) retains sufficient lands in a natural state to achieve the objectives for marginal resource areas (restricted);

(viii) other uses, provided it can be demonstrated that they will assist in the preservation of these lands or are not detrimental to the local character of the natural environment.

3(b) In order to assist in the preservation of these lands, it is necessary that certain levels of government and public agencies assume specific responsibilities to control public activities and to assist the private landowners to protect and preserve the natural environment.

3(c) When an application is made to sever or subdivide land for the purposes of development, Council shall decide whether it is necessary to acquire such lands in order to ensure the objectives for marginal resource areas (restricted) are met. If Council decides to acquire such lands, an offer of purchase shall be made according to the procedures in policies 3 ii) or 3 iii) of Section 5.3.5.

[OPA #12, 22 AUGUST, 1983 SECTION 5.3 (POLICY 3) ALL]

(4) Within the marginal resource areas and marginal resource areas (restricted) designated on Schedule "A", all new development shall conform with the environmental management policies contained in Section 5.6 of this plan.

[OPA #12, 22 AUGUST, 1983 SECTION 5.3 (POLICY 4) ALL]

5.6 ENVIRONMENTAL MANAGEMENT

5.6.1 INTRODUCTION

The protection of the natural environment is a major objective in establishing policies to distribute growth, as is the need to ensure that development is safeguarded from any natural hazards. Council's policy to consider the natural environment as an irreplaceable resource is of particular signficance for the setting of the nation's capital. In addition, it is important that the man-made environment does not suffer unduly from adverse influences such as air and noise pollution.

The planning area is fortunate in that development has not resulted in major environmental damage, although there are existing problems, such as water pollution, which require a concerted effort if they are to be overcome. With the prospect of substantial growth, Council recognizes that existing environmental problems must be corrected and potential problems avoided in the future.

5.6.2 **ENVIRONMENTAL CONSTRAINTS**

Council intends that the use of land should respect its natural constraints and limitations in order not only to protect life and property but also to minimize the alteration of the natural environment. With far more than sufficient suitable land available to accommodate projected growth in the planning area, there is no need to develop land whose inherent physical characteristics present hazards to construction.

[OPA #20, 18 JULY, 1983 SECTION 5.6.2 IN PART]

5.6.2.1 **Soil Problems**

The region has extensive deposits of marine clay, sometimes known as Leda Clay or sensitive clay, which are prone to landslide activity. Landslides result from the liquification of sub-surface clays causing the overlying material to collapse and flow outward. Although the phenomenon is not fully understood there are certain common characteristics. The folowing are known to be contributing factors: water saturation, shrinkage due to dehydration, overloading, and natural or human disturbances. In order for a slide to occur, sensitive clay must be exposed in the bank of a slope, thus affording an outlet for the clay. Because of its characteristics, Leda Clay presents a hazard to buildings where it is associated with slopes, particularly along watercourses.
[MINISTERIAL MODIFICATION, NO. 9, AUG. 30, 1976, SECTION 5.6.2 1 IN PART]

Bog and marsh organic deposits are to be found in many locations throughout the planning area but are more generally located in the southwest where they have formed in clay-filled depressions in the limestone bedrock. Such soils are unsuitable for septic tanks and, depending on their depth, may provide unsuitable support for building foundations. They also have poor drainage with the consequence that water at or near the surface is common.

Many areas subject to soil problems have been identified on Schedules "A" and "B" but a complete inventory for the planning area is not available.

It will therefore be necessary, in addition to referring to the schedules, to ensure that areas proposed for development do not contain hazards arising from soil conditions before such development is approved. Further, organic deposits have not been identified within areas designated on Schedules "A" and "B" as either "Mineral Reserve" or "Conservation and Recreation"; should these designations be removed from any lands in future, the organic deposits will be identified within the areas so amended.

5.6.2.2 **Steep Slopes**

For the purposes of this plan, steep slopes are considered to be slopes with a gradient in excess of 20%. These slopes, plus an area along the top, are frequently unstable where located in association with Leda Clay as noted in Section 5.6.2.1. Buildings on steep slopes or in areas that may be susceptible to slippage should be permitted only where a soils report has been prepared by a qualified soils engineer indicating what building, if any, is possible and under what conditions.

5.6.2.3 **Flood Plains**

The two conditions that may cause floods are the annual spring snow melt and heavy prolonged rains, although it is the former that is the more important. Flood plains are defined as those areas of land that will be inundated by a size of flood likely to occur once every 100 years. It is, however, possible for a greater flood to occur. Many of the areas subject to flooding have been identified on Schedules "A" and "B" but not all flood plains in the planning area have been mapped so further work is required. As further studies identify the extent of flood plains, this will be recorded by amendment to Schedules "A" and "B". However, in the interim it will be necessary, before approving development, to have provided sufficient information to establish if part or all of a site lies within a flood plain. Further, flood plains have not been identified within areas designated on Schedules "A" and "B" as either "mineral reserve" or "conservation and recreation"; should these designations be removed from any lands in future, the known flood plains will be identified within the areas so amended.

In interpreting the extent of the flood plain, Council will have regard to the maps prepared by the Conservation Authorities and, in conjunction with the Conservation Authorities, will consider other information such as land surveys and engineering drawings as may be pertinent and relevant.

[OPA #20, APPROVED BY THE OMB, 7 AUGUST 1985 SECTION 5.6.2.3 PART]

5.6.2.4 **Stream-Bank Erosion**

Erosion may take several forms (see following Section 5.6.3) and when it is associated with stream-banks, it creates hazardous conditions for building. It occurs along river banks and valleysides caused by slumping, undercutting or by the treading of cattle. In places it is associated with Leda Clay or steep slopes, as mentioned above. Reports by both the Rideau Valley and the Mississippi Valley Conservation Authorities identify areas in the planning area that are subject to stream-bank erosion.

Council therefore:

(1) For the purpose of Section 5.6.2 deems Environmental Constraint Area to include those areas described in Sections 5.6.2.1 to 5.6.2.4 inclusive and to include all environmental constraint areas so described whether identified or not on Schedules "A" and "B".
[OPA #20, 18 JULY, 1983 SECTION 5.6.2.4 (1) IN PART]

(2) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, affecting environmental constraint areas, will have regard for the following principles:
[OPA #20, 18 JULY, 1983 SECTION 5.6.2.4 (2) IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 5.6.2.4(2) IN PART]

i) only the following uses and activities will be permitted:

- farming, excluding farm housing,
- open air recreation,
- forestry, and
- those that will assist in conserving or managing water supplies, wildlife or other natural characteristics;
- pits, quarries, underground mining, wayside pits and quarries in areas of bog and marsh organic deposits as defined in Section 5.6.2.1, except in areas designated Natural Environment Area, Marginal Resource Area (Restricted), Special Policy Area, or in areas designated with the suffix "(River Corridors)". Once a pit, quarry, underground mine, wayside pit or wayside quarry has been exhausted and the licence has been surrendered, uses may be permitted in accordance with policies 2(i) to 2(vii) of Section 5.5.

[OPA #31, 27 DECEMBER 1984, SECTION 5.6.2.4(2)(i) IN PART]

ii) no building to be permitted except a building associated with one of the above permitted uses and not used for human occupancy or gathering;

iii) no severance or plan of subdivision to be permitted unless sufficient non-hazardous land forms part of the proposed severance or plan of subdivision to permit all buildings used for human occupancy or gathering, and all wells and septic tank fields to be located outside the environmental constraints area
[OPA #20, 18 JULY, 1983 SECTION 5.6.2.4.(2)(iii) IN PART]

iv) notwithstanding proposal (iii), no portion of a septic tank tile field to be located closer than 30 metres to the edge of a flood plain except where a lot was

created prior to the adoption of this plan by Council;

v) where it is not possible immediately to determine whether a proposed building or a lot to be created by severance or plan of subdivision lies in a environmental constraints area, to require the applicant to provide information sufficient to establish whether the policies of this section are met;
[OPA #20, 18 JULY, 1983, SECTION 5.6.2.4 (2) (v) IN PART]

vi) where new development is proposed on the site, part of which has physical or environmental hazards, then such environmental constraints areas shall not necessarily be acceptable as part of the dedication for park purposes under The Planning Act. All lands dedicated to the area municipality shall be conveyed in a physical condition satisfactory to that municipality. When an open watercourse is involved, adequate space shall be provided for maintenance and operations.
[OMB ORDER, NO. 23, MARCH 1980, SECTION 5.6.2.4(2) (vi) ALL]
[OPA #20, 18 JULY 1983, SECTION 5.6.2.4(2) (vi) IN PART]

(3) Will avoid undertaking any work that will encourage or necessitate any construction in environmental constraint areas. [OPA #20, 18 JULY, 1983 SECTION 5.6.2.4 (3) IN PART]

(4) Will assist the conservation authorities in programs to prevent and remedy stream-bank erosion through control over development likely to exacerbate the problem.

(5) Will request the conservation authorities to make regulations under the Conservation Authorities Act for controlling, insofar as they are able, the construction of buildings and the dumping of fill in environmental constraint areas. [OPA #20, 18 JULY, 1983, SECTION 5.6.2.4(5) IN PART]

(6) Will request the conservation authorities and other appropriate agencies to undertake studies to determine the location and extent of those flood plains, soil problem areas, and stream-bank erosion areas for those parts of the planning area that are not already surveyed and that, once this additional information is available, will amend this plan accordingly.

(7) No fill of any kind shall be dumped or removed from within the flood plain limits of any watercourse without the written consent of the local conservation authority. In areas which do not compose a portion of a conservation authority or where authority is not vested in the conservation authority, the written consent shall come from the Ministry of Natural Resources. [OMB ORDER, NO. 24, 11 OCTOBER, 1979, SECTION 5.6.2(7) ALL]

5.6.3 LANDSCAPE PROTECTION

In addition to protecting the more important natural areas in the planning area through "Conservation and Recreation" designations, there is also a need to protect the landscape in general, whether or not it is affected by new development. The reasons for this are not simply to maintain visual attractiveness but also involve the need to minimize erosion, soil loss, flooding, and destruction of wildlife habitats and timer resources. Accordingly, there are numerous aspects to landscape protection which should be considered. These are described below.

Soil erosion is dependent upon many factors, some natural, while others are due to man's activity and hence more controllable. There is stream-bank erosion, which creates hazardous building conditions as mentioned above in Section 5.6.2. Erosion may also occur off agricultural land as sheet, wind, or rill erosion as a result of cultivation practices and this leads not only to soil loss but also to stream sedimentation. On forest land, erosion may result from disturbance of ground vegetation due to either cattle grazing or logging operations. There is need to ensure that urban development does not result in excessive storm-water run off which in turn may cause erosion of stream-banks and valley sides. In this regard a report will be required on the effect of storm-water discharge and its method of control in accordance with Section 3.2. The removal of topsoil by man in a related consideration and, like erosion, affects not only the landscape but also agricultural productivity. It will be necessary for the provincial government to pass legislation before topsoil removal can be regulated.
[OPA #30,16 MARCH, 1983, SECTION 5.6.3 IN PART]

There are various ways with which to approach the protection and improvement of wooded areas. As mentioned in Section 5.3, the Regional Municipality is party to a cost-sharing agreement with the Ministry of Natural Resources whereby land is acquired and managed for forestry purposes. The Ministry also manages forest land on behalf of the Townships of Cumberland and West Carleton and the National Capital Commission. Under the Woodlands Improvement Act, the Ministry of Natural Resources will enter into a fifteen-year agreement with a private landowner whereby they will manage a plantation on his behalf. This program is proving very popular and under it 400,000 trees (162 hectares) were planted in the planning area in 1973. Interest from landowners is such that the Ministry expects to reach by the mid-1980's a planting level in the planning area of 1,000,000 trees (405 hectares) per year. In addition to these fifteen-year program will provide free advice to a landowner on woodland management up to a maximum of three days per owner in any one year.

Council has enacted a by-law under the Trees Act to regulate the cutting of trees. The section of the Act under which such by-laws may be passed is geared towards timber management needs rather than landscape protection and the controls take the form of stating the minimum trunk diameters that a tree must attain before it can be felled. Nevertheless, the by-law can

assist landscape protection by preventing indiscriminate cutting. Such a by-law applies to woodlots over 0.8 hectares in size but does not interfere with the rights of existing owners to cut timber for their own use. Council has made enforcement of this by-law the option of the area muncipalities. The only other method to control tree cutting is under the Municipal Act whereby a municipality may pass a by-law to prevent the destruction of trees growing by the side of a public roadway. Council has enacted such a by-law to protect trees along regional roads. In addition to protecting trees, other forms of vegetation such as hedgerows and areas of bushes have value not only as landscape elements but also as providing shelter for wildlife.

The preservation of existing land forms is of concern only where development is proposed but is not always possible where land has to be graded for the operation of sewer and water systems; however, where piped services are not being installed, a greater opportunity exists to maintain topographic variety as a beneficial characteristic is a new development. This aspect is also mentioned in Section 2.4.2.7.3. Major landforms, such as the Orleans escarpment, are subject to special policies as contained in Section 5.3.

The protection of waterways involves not only such concerns as erosion prevention and pollution control discussed elsewhere in the plan, but also the aesthetic, flood control, wildlife, and recreational value of creeks, wetlands, valleys, and gullies.

There are two aspects to this; firstly, there is the protection of the features themselves. This involves avoiding the diverting or channelizing of the waterway unless necessary for flood control or land drainage and keeping development out of the area between the edges of deeply incised valleys. It also means protecting marshes and wetlands which have a value either with regard to maintaining the water table, acting as a reservoir to retain flood runoff or providing wildlife habitats. The attainment of some of the above objectives necessitates control over drainage schemes and in this regard the conservation authorities need to enact regulations governing the alteration of the channel of a watercourse and also the use of water in or from a watercourse, pond, or swamp.

The second concern, which relates to the recreational aspect, is to maintain a strip of land between the lot lines of a new subdivision and an adjacent watercourse, lake, or valley edge so as to permit public passage.

Council therefore:

(1) Shall follow the procedure set out in Section 3.2 with regard to storm drainage.

(2) Shall request the Province of Ontario to enact legislation permitting muncipalities to control the removal of topsoil.

(3) Shall recommend to the area muncipalities that they enforce, within their area, the by-law enacted by Council under the Trees Act.

(4) Shall recommend to the area municipalities that they enact a by-law under Section 457 of the Municipal Act to control the destruction of trees along public roadways.

(5) Shall request the conservation authorities to enact regulations to govern the alteration of the channel of a watercourse and the use of water in or from a watercourse, pond or swamp.

(6) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, shall adhere to the following principles:
[OPA #30, 16 MARCH, 1983, SECTION 5.6.3(6) IN PART]

i) no buildings to be constructed between the edges of deeply incised valleys;

ii) severances and plans of subdivision to be designed so that an area is left to provide public passage between any abutting watercourse, lake, or valley side and the new lot lines;

iii) maintenance of the land forms and physical features of the site in their natural state as far as possible to ensure that the natural rather than man-made character of the site predominates;

iv) protection of any stream, pond, marsh, or lake for wildlife, drainage control, or aesthetic purposes;

v) protection and maintenance of trees and other vegetation where possible.

5.6.4 WATER RESOURCE - QUALITY AND QUANTITY

5.6.4.1 Introduction

The protection and utilization of water resources relate to the whole question of watershed management which involves areas outside the planning area and hence not entirely within the jurisdiction of this plan. Although such management is first and foremost the responsibility of the conservation authorities, there are also policies which Council needs to follow in the above regard. Policies concerning the water requirements of the urban and urbanizing areas and of the development in the villages and rural areas are contained elsewhere (Sections 2.4.2.6, 2.4.2.7 and 3.2). This section is concerned with matters of a more general nature that pertain to quantity and quality of water.

Over and above domestic and industrial consumption, there are many functions which water can be required to fulfil: navigation, recreation, power generation, wildlife conservation, irrigation of crops, and watering of cattle. At the same time, some of these activities may be in competition with each other and may be associated with problems such as: pollution,

erosion, sedimentation, and water depletion. The overall concern therefore is to ensure that sufficient water is available for various uses and that these uses do not cause the problems noted above. In these regards, both surface and ground water have to be considered.

5.6.4.2 **Water Quality**

The most important consideration relating to water quality is the discharge of waste water-both domestic and industrial. The ability of a watercourse to assimilate such discharge depends on the degree of treatment of the waste, the quality of the watercourse and the volume of flow as it varies throughout the year.

Monitoring of the quality of the watercourses is undertaken both by the Ottawa-Carleton Works Department and the Ontario Ministry of the Environment in order to identify problems that may exist and to determine what measures should be taken. In addition, the Medical Officer of Health monitors water quality as it relates to bathing beaches. Monitoring of the quality of well water is conducted by the Works Department, where such wells supply communities, but for private wells the responsibility lies with the user.

The different sources and occurences of water pollution have been considered in developing policies in this plan. These are described below.

The Ontario Ministry of the Environment has advised that the Ottawa River is the only watercourse in the planning area that can be regarded as suitable for accepting even treated sanitary sewage effluent and that therefore no new sewage treatment plant should discharge into the other rivers and streams. Storm water run-off has also been recognized as a source of water pollution both by the Ontario Ministry of the Environment and in investigations undertaken by the Ottawa-Carleton Works Department. The major source of pollution to the Rideau River and to the Ottawa River from the Ontario side is land wash caused by heavy or continuing rainfall. Studies by the Works Department reveal that run-off from roofs, streets and fields all contribute contaminants to surface waters.

The Ontario Ministry of the Environment states that storm drainage from new developments should be treated before entering the Rideau River or smaller watercourses. In this regard, a report will be required on the effect of storm-water discharge and its method of control in accordance with Section 3.2. For the Ottawa River, the concern is to ensure that storm drainage outfalls are not located in the vicinity of bathing beaches or intakes of water filtration plants.

Another source of water pollution results from defects in the sewer system, whether this be because a sanitary sewer is connected to a storm sewer or where, because of open pipe joints or broken pipes, sanitary waste can pass from sanitary to storm sewers. Investigations have been undertaken to determine where such situations occur and the problem has been mostly remedied.

Effluent from septic tanks can only be a source of water pollution where such enters a watercourse or the groundwater. In this regard, considerations are: proximity to a watercourse, height of the water table, soil composition, and depth, lot sizes and densities. Areas where aquifers are highly susceptible to pollution have been identified:*

- Where thin overburden overlies the bedrock. These areas are likely major recharge areas for bedrock aquifers.
- Where outcropping sand or gravel beds lie in contact with the bedrock. These sediments likely provide a source of ground water storage for bedrock aquifers.
- Where there are kame moraines. These areas are totally unsuitable for waste disposal as the moraines are hydraulically connected to the bedrock and pollution of both the overburden and bedrock aquifers can occur.

These soil factors plus the other considerations mentioned above are important for all developments not on piped services but become increasingly significant as population concentrations in an area increase. If a communal water system is available, ground water pollution is less of a health hazard and can be avoided entirely if a communal sanitary sewer system is installed. Before a permit to install a septic tank is issued, the site is inspected to assess the soil conditions and to indicate, where necessary, any special steps that must be undertaken.
[OPA #30, 16 MARCH, 1983, SECTION 5.6.4.2 IN PART]

The watering of cattle in streams is another source of pollution, and the provincial government has also identified the disposal of animal manure spread over too small an area can result in pollution of the ground water. In this regard they have developed recommendations which relate the numbers of animals to the minimum acreages required for manure spreading.** Council considers it advisable for these recommendations to be followed by farmers in the planning area.
[OPA #30, 16 MARCH, 1983, SECTION 5.6.4.2 IN PART]

5.6.4.3 **Water Quantity**

With the exception of the Ottawa, Rideau and Mississippi Rivers, the other watercourses in the planning area are characterized by very low summer flows which may be practically nil at times. Only the Ottawa is used as a source of water supply in the planning area but low flows do reduce the value of the other watercourses for recreation and also their ability to absorb treated sewage effluent. Only the Ottawa has sufficient flow so that the latter is not a concern and the water volumes in this river are also sufficient to meet the projected consumption requirements in the planning area.

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*Ground Water Survey, The Regional Municipality of Ottawa-Carleton, The Ontario Water Resources Commission, 1970.

**Agricultural Code of Practice for Ontario, the Ministry of the Environment and the Ministry of Agriculture and Food, 1976 - see Appendix B.

Information on ground water provides estimates of expected well yields from different geological formations.* Where a well is to serve six or more dwellings or if it is to yield 45,000 litres per day or more, the Ontario Ministry of the Environment require evidence as to the ability of the proposed well to sustain a flow sufficient to meet proposed consumption. Where six or more dwelling are to be served, the Ministry also must be satisfied as to water quality. Apart from rate of use, density of development can also affect long term yield by causing one well to interfere with the supply of another. This problem may be avoided where a communal water system is installed but a study of the impact of such a system on the ground water will be required as noted above.

The quantity of water carried by a watercourse can be dramatically increased by storm water run-off or discharge. This causes pollution as noted earlier, not to mention erosion and property damage. In this regard, a report will be required on the effect of storm-water discharge and its method of control in accordance with Section 3.2. Erosion of agricultural land may lead to stream sedimentation thus reducing the channel capacity of the watercourse, which in its turn affects the rate at which the land can be drained. Council considers it advisable that practices that will reduce erosion off agricultural land be followed by farmers in the planning area.

Council therefore:

(1) Shall require that all future development within the areas designated on Schedule "A" as "Principal Urban Areas" and "General Location of the south part of Nepean and the south part of Gloucester in the South Urban Community", be serviced entirely by the central water supply and sanitary sewer systems, with the exception of some of the Barrhaven part of the South Urban Community whose water supply is intended to be based on a communal well system.
[OMB ORDER, NO. 68, MARCH, 1980, SECTION 5.6.4.3(1) IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 5.6.4.3(1) IN PART]

(2) Intends that single family residential development on private individual services may be permitted within the inner limits of the greenbelt on lots in plans registered prior to the adoption of this plan.

(3) Shall ensure that new sanitary sewer systems discharge only treated wastes and that such wastes shall not be discharged into any watercourse in the planning area other than directly into the Ottawa River, at least until a type of system is available which, in the opinion of the Ministry of the Environment and

*Ground Water Survey, The Regional Municipality of Ottawa-Carleton, The Ontario Water Resources Commission, 1970.

[OPA #30, 16 MARCH, 1983, SECTION 5.6.4.3 IN PART]

of Council on the advice of the Works Commissioner, would permit the latter limitation to be amended or even removed, at which time Council will consider amending this policy.

(4) Shall follow the procedure set out in Section 3.2 with regard to storm drainage.

(5) Shall require that communal water system and communal sanitary sewerage systems be to the satisfaction of the Ottawa-Carleton Works Commissioner.

(6) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws and site plans, or amendments to one or more of them, shall adhere to the following principles in addition to any more specific requirements stipulated in Sections 2.4.2.6 and 2.4.2.7:
[OPA #30, 16 MARCH, 1983, SECTION 5.6.4.3(6) IN PART]

i) development that is not to be served from a communal sanitary sewerage system shall be permitted only where conditions are satisfactory for the long-term operation of the septic tanks, and

ii) development that is not to be served from a communal water system shall be permitted only where water of of an adequate quality and quantity can be provided and where a depleting effect on an existing water supply will not result.

5.6.5 SOLID WASTE DISPOSAL

5.6.5.1 Garbage Disposal

. A further concern of Council is that adequate provision is made for the disposal of solid wastes. Disposal of garbage and other solid wastes is a regional responsibility, while collection is a responsibility of the area municipalities.

. The Region operates a sanitary landfill site on Trail Road in Nepean as the main disposal site for the urbanized area.

. Separation and recycling of materials such as paper, metals and glass can conserve valuable resources, save energy, create jobs and reduce pollution. Alternatively, municipal garbage and other solid wastes can be burned and converted into steam and electricity. Both recycling and heat recovery reduce the volume of solid waste to be landfilled, thus reducing municipal costs and extending the life of sanitary landfll sites. Council therefore:

1) Shall make adequate provision for the disposal of solid wastes.

2) Shall promote recycling as a way to reduce

municipal costs, minimize environmental degradation and conserve energy.

3) Shall investigate and, if feasible, co-operate in the construction of a solid waste-fired energy recovery facility.
[OPA #34, 9 MAY, 1983 SECTION 5.6.5.1 ALL]

5.6.5.2 **Automobile Disposal**

A specific problem related to the disposal of solid wastes is the disposal of old cars and trucks because they are often abandoned indiscriminately. It is Council's intention to investigate alternative methods of disposing of old vehicles in the planning area. This will be done in association with other levels of government and other interested parties. Council therefore proposes:

(1) To undertake a study to determine the most desirable method of disposing of old vehicles.

5.6.5.3 **Snow Disposal**

An additional waste disposal problem is the disposal of snow in the urban parts of the planning area. A recent study has recommended that changes should be made in the present methods of snow disposal because of physical, pollution, and community problems. The report* proposes a combination of direct dumping into the Ottawa River, snow melters, and trucking to sites outside the existing urban area. These recommendations have not yet been accepted by Council and negotiations with other levels of government are continuing. An objective of this plan is to ensure that the sites recommended for the disposal of snow are not pre-empted by other uses until Council has had time to investigate with other levels of government all the implications of the recommendations.

Council therefore proposes that:

(1) The lands designated on Schedules "A" and "B" for potential snow disposal sites shall continue to be used in the summer in which they were used on the date of the adoption of this plan by Council until Council has by resolution decided upon the recommendations in the "Snow Disposal Study for the National Capital Area" by J.L. Richards and Associates Ltd. dated June 1973.

(2) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, affecting lands in the vicinity of the lands designated as potential snow disposal sites, Council will consider:
[OPA #30, 16 MARCH, 1983, SECTION 5.6.5.3 IN PART]

*J.L. Richards and Assoc. et al. "Snow Disposal Study for the National Capital Area", 1973.

i) the compatibility of the proposed use with the disposal site, and

ii) the adequacy of regional roads to serve the disposal site and their relationship to the proposed development.

5.6.6 **AIR POLLUTION**

Air pollution is not at present a major problem in the planning area. The main sources of air pollution are industrial operations and fuel burning equipment.* In addition, air pollution associated with farming is a greater problem than in the past because of the trend toward more intensive livestock and poultry enterprises and the increasing numbers of non-farm residents in the rural part of the planning area.

Because of the nature of the activities which cause air pollution, control is best exercised by senior levels of government. For example, emissions from fuel burning equipment are most dramatically reduced by making improvements in the design of the equipment and by increasing the standards of the fuels being consumed. These controls are best applied at the point of manufacture or sale** by either the provincial or federal governments.

The Ontario Ministry of the Environment has implemented a comprehensive air pollution control program based on the Environmental Protection Act, 1971. The program is designed to assure acceptable air quality in the Province by controlling emission levels from future development and equipment and by reducing emission levels from existing stationary sources of air pollution.

Also, in an attempt to curb both air and water pollution associated with the farming industry, the Ontario Ministry of the Environment and Ministry of Agriculture and Food have prepared the Agricultural Code of Practice for Ontario (1976) - see Appendix B. [OPA #30, 16 MARCH, 1983, SECTION 5.6.6 IN PART]

With respect to air pollution, the Code emphasizes overall farm management and, in particular, manure management methods, dead animal disposal procedures, and separation distances from manure storages and livestock and poultry buildings to neighbouring dwellings.

The air pollution abatement programs of the senior governments can be reinforced to some extent by appropriate policies and programs at the regional and local level. Council considers the following policies to be the most effective means by which the Region can provide direct support for these programs:

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*Primarily comfort heating equipment and internal combustion engines in motor vehicles.

**Examples are minimum standards for auto engine emissions and for the sulphur content of fuel oil.

(1) Proper land use planning.

Even with effective air pollution control programs, some problems can be expected from the effect of either industrial or farm operations on nearby residential and other land uses. Council's policies for industrial development in Section 2.5.4.2, and for rural residential development in Section 2.4.2, include provisions for the adequate separation of incompatible land uses in order to minimize this problem. In addition, Council shall encourage the area municipalities to consider potential air pollution problems when preparing and implementing local planning programs and to this end Council shall, when approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, ensure the proper separation of those land uses which are potentially incompatible because of air pollution.
[MINISTERIAL MODIFICATION, NO. 10, AUG. 30, 1976, SECTION 5.6.6(1) IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 5.6.6(1) IN PART]

(2) Implementation of an efficient transportation system.

As the population in the planning area expands, air pollution from traffic will become a matter of increasing concern, particularly within the central area. In general, the more efficiently transportation needs are met, the less serious is the air pollution. Council expects that progressive implementation of the transportation policies in Section 3.1 will make a significant contribution to air pollution abatement in the urban area.

5.6.7. NOISE POLLUTION

Noise is one of the most difficult forms of pollution for which to develop effective abatement programs. As with air pollution (Section 5.6.6 above), control of many aspects of noise pollution is best exercised by senior levels of government. The federal government, for example, is actively pursuing noise abatement by developing noise standards for manufactured articles and equipment. In addition, Transport Canada has developed techniques for assessing the environmental impact of noise generated by aircraft during take-off and landing and has translated these into land use recommendations. These techniques involve not only absolute noise levels but also the duration of the noise, the number of times per day that the disturbance occurs and the daily distribution of these events. From these data, "noise exposure forecast" (NEF) contours are drawn to indicate areas which may be affected, to differing degrees, by noise.
[OPA #30, 16 MARCH, 1983, SECTION 5.6.7 IN PART]

Two sets of NEF contours have been prepared for Ottawa International Airport: NEF 1976 based on existing airport geometry and air movements forecast, and an additional contour which reflects development options or concepts which may be applicable during the 25-to-40-year period covered by the Official Plan. These contours, particularly NEF 1976, are subject to revision when significant changes occur in the factors which make up the NEF system. Specific NEF contours have not been prepared for Carp Airport; rather it is the practice of the Ministry of Transport to use a standard set of contours for this class of airport.

These contours, shown on Schedules "A" and "B", must be read in conjunction with the "Aircraft Noise Land Use Table"* which indicates appropriate land uses within each NEF zone. Council intends that all development within the airport noise zones shown on Schedules "A" and "B" be in accordance with the Aircraft Noise Land Use Table prepared by Transport Canada as it may be amended from time to time. Council also intends that these policies for the use of land adjacent to existing airports be applied to any new airports which may be established within the planning area in the future.
[OPA #30, 16 MARCH, 1983, SECTION 5.6.7 IN PART]

At the provincial level, the Ministry of the Environment is preparing a comprehensive noise abatement program as part of the provincial environmental protection program;** however, although regulations governing permissible noise levels*** are being prepared, they are yet to be announced.**** The Ministry is also preparing a model noise control by-law for adoption by municipalities and may provide technical back-up to assist the municipalities to enforce noise by-laws. Council supports the City of Ottawa initiatives in the field of noise control legislation and will encourage the other municipalities in the planning area (particularly the urban or urbanizing ones) to adopt and enforce the provincial regulations when they are available. The Ministry has also recognized the problems associated with noise generated by traffic and has prepared guidelines for the use of land along expressways - see Appendix D. Council shall encourage area municpalities to consider noise problems associated with heavily travelled roads when preparing and implementing local planning programs and to this end Council shall, when approving or considering local official plans, plans of subdivision, severances, restricted area by-laws, and site plans, or amendments to one or more of them, ensure that the land uses proposed in the vicinity of the roads which make up the primary road network shown on Schedules "C" and "D" are appropriate in relation to the anticipated traffic volumes and operational speeds.

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*Included in Appendix C.
**The Environmental Protection Act includes sound and vibration in the definition of environmental contaminant.
***To cover a range of noise sources, including industry, construction activities, vehicles (including recreational vehicles) and nuisance sources such as air conditioning equipment.
****As of April, 1974.

In summary, Council proposes to pursue the following policies:

(1) Council shall request the provincial government to enact enabling legislation which will permit municipalities to adopt comprehensive noise control by-laws and, when and if such Provincial legislation is enacted, Council shall encourage area municipalities to adopt such by-laws.
[OPA #30, 16 MARCH, 1983, SECTION 5.6.7(1) IN PART]

(2) Council shall encourage the area municipalities to consider noise problems associated with heavily-travelled roads when preparing and implementing local planning programs and, to this end, Council shall, when approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, ensure that the land uses proposed in the vicinity of the roads which make up the primary road network shown on Schedules "C" and "D" are appropriate with respect to the anticipated traffic volumes and operational speeds.
[OPA #30, 16 MARCH, 1983, SECTION 5.6.7(20) IN PART]

(3) When approving or considering local official plans, plans of subdivision, plans of condominium, severances, restricted area by-laws, and site plans, or amendments to one or more of them, any of which involve or affect lands which are located either in whole or in part within the NEF contours shown on Schedules "A" and "B", Council shall ensure that the proposed land uses accord with the "Compatible Land Use Table" prepared by the Canadian Air Transportation Administration, Transport Canada, as it may be amended from time to time (see Appendix C of this plan.)
[OPA #30, 16 MARCH, 1983, SECTION 5.6.7(3) IN PART]

(4) No public work shall be undertaken that may encourage or necessitate development of land within the NEF contours except that development which will be in accordance with the provisions of policy (3) above.

(5) Where any other provision(s) of this plan, e.g., Section 5.6.2 (hazard lands), or any local official plan or restricted area by-law, is more restrictive than the requirements of policy (3) above, the more restrictive policy(ies) shall apply.

(6) Where any doubt exists as to whether any local official plan, restricted area by-law, an amendment to one or both of them, plan of subdivision, or severance involves land within a particular NEF contour, reference shall be made to Transport Canada to resolve the matter.
[OPA #30, 16 MARCH, 1983, SECTION 5.6.7(6) IN PART]

(7) Any airport that may henceforth be established within or adjacent to the planning area shall be so located that its intended operation, in relation to the "Compatible Land Use Table", shall have a minimum effect on the adjacent development existing at the time.

PART 6

6.0 IMPLEMENTATION

6.1 REGION'S GOALS

A major goal of this plan is "to develop a program to facilitate the coordinated implementation of the plan to achieve identified goals providing for continual evaluation and updating and to ensure that the regional plan is compatible with those of the larger communities". The sub-goals covered administrative procedures, flexibility in the plan, a framework for local planning, and the provision of citizen participation.

6.2 EFFECT OF THE PLAN

The Planning Act, Section 19(1) provides that where an official plan is in effect, no public work shall be passed for any purpose that does not conform therewith. In addition the Ottawa-Carleton Act, Section 68(7) provides that when the Minister has approved this official plan every by-law passed under Section 35 of The Planning Act shall be amended forthwith to conform with this official plan.

6.3 INTERPRETATION

There are four elements to this Plan - the Text, Schedules, Appendices, and Information Maps. The whole of the text included in Parts 1 to 6, and Schedules "A", "B", "C", "D", "E", and "F" constitute the Official Plan for the Regional Municipality. The Appendices do not constitute part of this Official Plan, and are included for the purposes of information only. Maps 1-29 are provided for purposes of information only and policy implications are not intended except for the following:
[OPA #20, 18 JULY, 1983, SECTION 6.3 IN PART]

(i) residential areas A, L, M, T and U shown on Map 3;

(ii) future guidelines for transit usage shown on Map 5; and

(iii) the five-leg system of rapid transit corridors shown on Map 6.
[MINISTERIAL MODIFICATION NO. 11A, AUG. 30, 1976, SECTION 6.3 IN PART]

Schedules "A" and "B" have been drawn on a generalized base map. Boundaries between areas designated or shown by symbols on Schedules "A" and "B" are approximate and shall be considered as general only. They are not intended to define the exact location or extent of such areas except where they coincide with major roads, railways, transmission lines, streams or other bodies of water, and other clearly recognizable physical features. If there is any conflict between Schedules "A" and "B", within the outer limit of the greenbelt and in all urban communities, Schedule "B" shall prevail, elsewhere, Schedule "A" shall prevail. Future roads designated on Schedules "C" and "D" are shown in approximate locations only. In this way a degree of flexibility is afforded by the

designations. When the proposed roads designated on Schedules "C" and "D" are constructed they shall be shown as existing without amendment to this plan.
[MINISTERIAL MODIFICATION, NO. 11B, AUG. 30, 1976, SECTION 6.3 IN PART]
[OMB ORDER NO. 70, 11 OCTOBER, 1979, SECTION 6.3, IN PART]

6.4 AMENDMENTS TO AND REVIEW OF THIS PLAN

Council intends to detail and amplify the policies in this plan by means of amendments which will be formulated from time to time as deemed necessary. Reference has been made in this plan to subjects which will be examined by Council, e.g. the proposed river corridor.

Any Amendments to this plan shall have regard to the following criteria:

- the need for the proposed change,
- the extent to which the existing designated areas in the proposed land use categories are developed,
- the physical suitability of the land for the proposed change,
- the effect of the proposed change on surrounding areas and on the need for services and facilities,
- the potential effect of the proposed change on the financial position of the regional municipality or area municipality.

A continuing appraisal of this plan will be carried out by Council to:

- ensure that the plan's policies are adequate for the achievement of its goals and objectives,
- ensure that the plan's objectives remain valid and realistic in light of prevailing circumstance.

6.5 METHODS OF IMPLEMENTATION

6.5.1 INTRODUCTION

There are several specific aspects of implementation which require detailed elaboration as a result of this plan. These include:

- public works and capital works programs,
- area municipal planning,
- subdivision of land,
- public ownership of land,
- relationship with other governments and agencies,
- delegation of ministerial approval powers,
- maintenance and occupancy by-laws.

[MINISTERIAL MODIFICATION, NO. 12, AUG. 30, 1976, SECTION 6.5.1 IN PART]

6.5.2 PUBLIC WORKS AND CAPTIAL WORKS PROGRAMS

Services which are the responsibility of Council to provide, such as water supply, waste water disposal, roads, and public transport will be provided in accordance with the objectives and policies of this plan. Priorities for the provision of such services will be established through the five-year capital budget forecasts in relation to the priorities established in this plan for the development of urban areas and in relation to village communities, with the object of ensuring an adequate level and full range of municipal services and community facilities to be developed at an early stage in each urban area.

The principal water, trunk sewer, and waste water control works required to implement this plan have previously been identified in a report* to Council which has been adopted in principle.
[OMB ORDER 69, 11 OCTOBER, 1979, SECTION 6.5.2 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 6.5.2 IN PART]

Services and programs relating to Part 4 of this plan which are the responsibility of Council to provde will be developed on an ongoing basis. Since many of these do not involve a capital expenditure, they do not occur in the five-year capital forecast. However, current expenditures may be found in the document "Current Budget" published annually.

The provision of services and public works which are the responsibility of area municipalities must be in conformity with this plan. Area municipalities should adopt by by-law their own five-year capital budget forecast to coordinate their expenditures with that of the Regional Municipality, thereby ensuring that facilites and services can be provided in accordance with this plan, the region's capital budget forecast, area municipal official plans and the area municipal capital budget forecast.

In summary,Council's policies are:

(1) In accordance with the provisions of Section 19 of the Planning Act (RSO 1980) as amended, no public work shall be undertaken that does not conform with this plan provided that nothing shall prevent:
[OPA #30, 16 MARCH, 1983, SECTION 6.5.2(1) IN PART]

(i) the extension of piped services to serve land uses existing on the date of the adoption of this plan,

(ii) the oversizing of piped services to provide for additional uses contemplated by this plan,

(iii) the oversizing of piped services to provide for possible future demands.

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*J.F. MacLaren and J.L. Richards, "Report and Technical Discussion on the Master Plan of Water Works and Waste Water Control".

(2) Council shall undertake the capital works for which it is responsible in accordance with a continuing five-year capital works program, which may be revised from time to time, as circumstances warrant or as required to fulfil the objectives of this plan.

(3) Area municipalities shall undertake the capital works for which they are responsible in conformity to this plan and in accordance with a continuing five-year capital works program.

6.5.3 **AREA MUNICIPAL PLANNING**

In the Regional Municipality, with its two tier system of government and responsibilities, considerable reliance is placed on area municipalities to ensure the implementation of this plan. The main tools available to area municipalities are local official plans and restricted area by-laws.

Local official plans and restricted area by-laws in force on the date of the adoption of this plan may have to be amended.* Additionally this plan provides for more detailed policies to be developed and incorporated into local official plans prior to development proceeding. These two aspects should be recognized as separate entities. It is usual for an official plan to cover the whole of a municipality. Despite the fact that this plan provides a general framework for the Region, it is considered essential for each municipality to prepare an official plan covering the whole of the municipality. This comprehensive plan shall address the general development strategy within the municipality in accordance with provisions contained in Section 1.3A.
[MINISTERIAL MODIFICATION, NO. 13A, AUG. 1976, SECTION 6.5.3 IN PART]

Section 2.4.2 provides that village and country lot development and residential infilling in hamlets take place on the basis of local official plans prepared for the area municipalities and approved pursuant to The Planning Act. Council considers it desirable, however, that rural residential development continue in the interim. Thus, until such approved local official plans are available to guide development, Council will consider applications for plans of subdivision for village and country lot development on the following basis:
[MINISTERIAL MODIFICATION, NO. 13C, AUG, 1976, SECTION 6.5.3 IN PART]
[OPA #3, MARCH 1, 1979, SECTION 6.5.3 IN PART]

(i) The population resulting from country lot development (since October 9, 1974) shall not cause the population of the area municipality to exceed one-quarter of the total Stage 1 population increase in Table 2-6. In the interim period, country lots are permitted only in the marginal resources area until local official plans have been prepared.
[MINISTERIAL MODIFICATION, NO. 13D, and 13E, AUG. 30, 1976, SECTION 6.5.3(1) IN PART]

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* The Ottawa-Carleton Act, RSO 1970, Ch. 407, Section 68(7).

(ii) Village expansion shall be in the form of either infilling or small scale development immediately adjacent to the existing built-up area, provided that the total population resulting from such development does not exceed 20% of the 1973 population of the village. This provision is not intended to apply to villages such as Stittsville and Manotick where communal services are already required; further development in these villages should be deferred until communal services are available, except for the part of Manotick which is on Long Island where all future development will be on the basis of a minimum of 0.2 hectare lots.
[MINISTERIAL MODIFICATION, NO. 13F, AUG. 30, 1976, SECTION 6.5.3(2) IN PART]
[OPA #14, JUNE, 1980, SECTION 6.5.3 IN PART]

(iii) Each application shall be accompanied by a resolution of the appropriate area municipal council indicating support for the application.

(iv) Applications must accord with the regional objectives and guidelines for local official plans for village and country lot development as contained in Sections 2.4.2.6.2, 2.4.2.6.3, 2.4.2.7.2 and 2.4.2.7.3 respectively.
[OPA #30, 16 MARCH 1983, SECTION 6.5.3 IN PART]

It is of importance to the orderly development of the future urban communities and the redevelopment of any parts of the areas within the inner limit of the greenbelt that, after the approval of the Regional Official Plan, local plans be prepared for the development of future urban communities and for redevelopment within the greenbelt. In view of the policies of Section 2.2.2 regarding the order of development of the future urban communities, Council will immediately, upon approval of this plan, encourage the preparation of amendments to the local official plan to deal with the lands affected by redevelopment within the greenbelt and the West and East Urban Communities. Similar amendments to local official plans shall be prepared to deal with the lands within the South Urban Community once a concept plan for this community has been incorporated into this plan by amendment.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.3 IN PART]

An additional consideration which must be taken in preparing the local plans is the fact that West, East, and South Urban Communities each straddle municipal boundaries. The respective municipalities shall ensure that there is frequent liaison during the plan's preparation so that the future urban communities are developed in accordance with a unified planning concept.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.3 IN PART]

It is intended that comprehensive restricted area (zoning) by-laws shall be brought into effect in accordance with the provisions of The Planning Act by the local Councils. Such by-laws shall contain

land use zones in accordance with the proposals contained within this plan, and will establish regulations to control the use of land and the character, location, and use of buildings and structures.

Some existing restricted area by-laws may require amendment as a result of the adoption of this plan. However it is not Council's intention to affect the status of development which exists on the date of the adoption of this plan. Its objectives and polices are directed primarily to development which will follow its adoption. Accordingly buildings or uses which exist on the date of the adoption of this plan shall not be forced into a non-conforming situation merely by reason of the requirement to amend an existing restricted area by-law to make it conform with this plan. For example a legally zoned industrial use in an area designated residential district in this plan should not have to be made non-conforming through a by-law amendment purporting to bring by-laws into conformity with this plan.
[OPA #20, APPROVED BY THE OMB, 7 AUGUST, 1985, SECTION 6.5.3 IN PART]

It is not intended that all the policy areas designated on the Rural and Urban Policy Plans, Schedules "A" and "B" will be zoned immediately for purposes specified in this plan. Land is designated in this plan which is not expected to be required or capable of being developed for several, and in some cases, many years. Such land should not be zoned for purposes described in this plan until its development is imminent.
[MINISTERIAL MODIFICATION, NO. 13G, AUG. 30, 1976, ON SECTION 6.5.3 IN PART]

Section 96(7)(a) of the Regional Municipality of Ottawa-Carleton Act (R.S.O. 1980) provides that when the Minister has approved this plan every local official plan and restricted area by-law in the planning area affected thereby shall be amended to conform to this plan. Council will establish the matter of conformity by interpretation having regard to the generality of the policies contained in this plan. Plans of subdivision which have been recommended for approval to the Minister of Municipal Affairs and Housing by Regional Council prior to the adoption of this plan by Council, but not registered as of the date of the plan's adoption, may be approved or registered notwithstanding the provisions of this Plan.
[MINISTERIAL MODIFICATION, NO. 13H, AUG. 30, 1976, SECTION 6.5.3 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 6.5.3 IN PART]

In summary, Council's main policies are:

(1) In accordance with Section 96(7)(a) of the Regional Municipality of Ottawa-Carleton Act (R.S.O. 1980), when the Minister has approved this official plan, every official plan and by-law passed under The Planning Act then in effect shall be amended and submitted to the body having jurisdiction in the matter for approval forthwith.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.3(1) IN PART]

(2) In accordance with Part 2.4.2 of this plan, area municipalities shall prepare, adopt, and submit for approval official plans or amendments thereto, for country lot and village development within one year of the approval of this plan by the Minister. In the event this time limit imposed cannot be met for cause,the Regional Council will grant an extension in time which appears reasonable to it under the circumstances.
[OMB ORDER, No. 26, 11 OCTOBER, 1979, SECTION 6.5.3(2) IN PART]

(3) Until such official plans are approved, interim rural development may be permitted in accordance with policies expressed above.

(4) Council requests area municipalities without comprehensive restricted area by-laws to pass a by-law under The Planning Act and submit it for approval to the Ontario Municipal Board within one year of the approval of this plan by the Minister.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.3(4) IN PART]

(5) If (4) above is not carried out, Council will either.

(i) petition the Minister of Municipal Affairs and Housing by order to exercise powers conferred upon Councils by Section 39 of The Planning Act (R.S.O. 1980) under Section 35 of The Planning Act (R.S.O. 1980), or
[OPA #30, 16 MARCH, 1983, SECTION 6.5.3(i) IN PART]

(ii) petition the Government of Ontario to permit Council to pass restricted area by-laws under Section 39 of The Planning Act, (R.S.O. 1980).
[OPA #30, 16 MARCH, 1983, SECTION 6.5.3(ii) IN PART]

6.5.4 SUBDIVISIONS OF LAND

Land development shall generally take place by plan of subdivision, because through this process the complete implications of the development are taken into account. The municipality can determine the type and rate of development more easily, other agencies have an input and all can be protected through the granting of draft approval subject to conditions and the fulfillment of the conditions often by way of a subdivision agreement. In this way the municipalities are protected, and the standard of planning and design is high.

A limited number of consents to sever land may take place where a plan of subdivision is clearly not necessary for the proper and orderly development of the municipality and provded that they are in accordance with the policies of this plan. Consents should only be granted for land uses which are permitted by this plan or in relation to uses which, although not permitted by this plan, were in existence at the time of the adoption of this plan.

In 1973 approximately 100 consents were given each month in the planning area. Council considers that planning advice should be made available to consent-giving bodies. These consent-giving bodies, as of the end of 1977 consist of the Regional Land Division Committee with sole consent-granting authority for the Townships of Cumberland, Osgoode, Rideau, Goulbourn, West Carleton, the Village of Rockcliffe Park, the five local committees of adjustment with consent granting authority for the cities of Ottawa, Vanier, Nepean, Kanata, and Gloucester.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.4 IN PART]

In summary Council's main policies are:

(1) Land development in the planning area shall generally be by plan of subdivision in accordance with Section 33 of The Planning Act.

(2) That consents (severances) be administered locally (subject to an area municipal official plan being approved) unless the area municipality requests to be served by the Regional Land Division Committee.
[OMB ORDER, NO. 27, 11 OCTOBER,1979,SECTION 6.5.4 IN PART]

6.5.5 PUBLIC OWNERSHIP OF LAND

Public ownership of land has an important part to play in the implementation of this plan.

(1) As the ultimate method in controlling the use of land

e.g. to protect land for public use threatened by development pressures

(2) To achieve a particular goal

e.g. to develop an industrial park, to encourage the decentralization of employment, or to ensure a specific housing mix

(3) To ensure that developed land can be provided more cheaply

e.g. the creation of land banks for housing purposes.

Council may acquire land to implement specific aspects of this plan. Council has already embarked on a program of land purchase in the natural environment areas and marginal resource (restricted) areas and intends to expand the program as described in Section 5.3.5 and 5.5.
[OPA #12, 22 AUGUST, 1983 SECTION 6.5.5(3) IN PART]

However, Council cannot be expected to carry the burden alone. Other levels of government should play their part, and the initiative played by the federal and provincial governments in assembling land for the Carlsbad Springs area in the southeast is welcomed.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.5(3) IN PART]

Within the boundaries of Ottawa-Carleton the federal government has a large number of land holdings in addition to the greenbelt totalling approximately 2,800 hectares. They should not remain underused

when competition for land has increased some land prices ten-fold in a few years.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.5(3) IN PART]

Council calls on the federal government to review its land needs in the light of its future needs and the policies expressed in this plan.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.5(3) IN PART]

In summary Council's policies are:

(1) Council will acquire land to implement specific aspects of this plan.

(2) Council encourages the federal government to develop existing and future land holdings in accordance with this plan.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.5(2) IN PART]

(3) Council shall request the provincial government and the federal government to review and enact a land bank policy that will not only assist the objectives of this plan but will also meet the long term requirements and interests of the public.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.5(3) IN PART]

6.5.6 RELATIONSHIP WITH OTHER GOVERNMENTS AND AGENCIES

The realisation of policies contained in this plan is dependent to a large degree on the capability of Council, the area municipalities, the senior levels of government, and other agencies to plan for and provide those services and facilities over which they have jurisdiction. A coordinated approach is essential. Council recognises the need for cooperation between itself and other levels of governments and agencies.

6.5.7 DELEGATION OF POWERS OF MINISTERIAL APPROVAL

The provincial government has delegated certain approval powers exercised by the Minister of Municipal Affairs and Housing to Council. These powers include:
[OPA #30, 16 MARCH, 1983, SECTION 6.5.7 IN PART]

(1) The approval of plans of subdivision.

(2) The approval of plans of condominium.

(3) The approval of local official plans and amendments thereto.

(4) Commenting to the Ontario Municipal Board on restricted area by-laws passed by area municipalities.

(5) Monitoring of severances granted by the Regional Land Division Committee and Committees of Adjustment as long as they continue to exercise jurisdiction.

[MINISTERIAL MODIFICATION, NO. 14, AUG. 30, 1976, SECTION 6.5.7 IN PART]
[OPA #30, 16 MARCH, 1983, SECTION 6.5.7 IN PART]

Council will therefore become the vehicle through which policies expressed in this plan will be implemented, although the Minister of Municipal Affairs and Housing will have authority to 'call in' any application for which the approval of Council is sought.
[OPA #30, 16 MARCH, 1983, SECTION 6.5.7 IN PART]

When considering official plans, plans of subdivision, restricted area by-laws, severances, and amendments thereto, Council's function prior to receiving these additional powers was only to consider their implications for the Regional Municipality. When the additional powers are assumed, Council will also take on the responsibility of ensuring sound planning practices are followed.

6.6 PUBLIC PARTICIPATION

During the preparation of this plan, Council has sought and obtained valuable participation from the public. Council's objective in seeking this participation was the establishment of a working partnership between the municipal administration and citizens so that regional planning policies correspond closely to the goals and aspirations of the inhabitants.

It is Council's intention to maintain participation as a means to ensure the implementation of this plan in a way that is in the best interest of the regional community and is in harmony with local requirements. As stated elsewhere in this plan, Council intends to involve itself in many specific studies after the approval of this plan, e.g. River Corridor Study, transit evaluation studies. Council commits itself to continuing public participation in such studies. Extensive use will be made of the skills and resources that communities and individuals are prepared to provide. In this way interested citizens should be able to have good access, not only to information, but also to the decision-making process.

However, Council believes such a commitment should also be made by other levels of government. The effectiveness of Council's effort will be much reduced if other levels of government do not also participate in the same exercise. The fact that there may be points of disagreement should deter no one, for it is only through debate in public that the citizen can be informed of the issues, and it is only by listening to the citizens' reaction that an informed decision be made.

In summary Council's main policies are:

(1) A continuous program of public participation will be provided by staff and other resources. The program will focus particularly on major studies undertaken by Council.

(2) The participation activity specifically assessed and adjusted to the needs of each situation by all participants (elected representatives, citizens, staff).

(3) Any participation activity specifically related to area municipalities will be conducted in

conjunction with or after notification of municipal councils and planning boards.

(4) Council requests the full cooperation of all levels of government to further the role of public participation in the planning process.

APPENDIX "A"

ANALYSIS OF ALTERNATIVE LOCATIONS OF NEW COMMUNITIES

The table below summarizes the analysis referred to in Section 2.2.2. Weighting was derived from submissions from the public. Scores were formulated from measurable criteria where possible, e.g. acres of land with high agricultural potential, readily available fact, e.g. presence or absence of a local official plan.

CRITERIA	WEIGHT	WEST	SOUTH WEST	SOUTH NEPEAN	GLOUC-ESTER	SOUTH EAST	EAST
FIELD 1 ENVIRONMENT							
(a) Agriculture	High	A	C	C	C	A	C
(b) Mineral Reserve	Low	B	C	C	A	A	C
(c) Water Quality	High	B	C	C	C	C	A
(d) Landscape Attraction	Medium	A	B	A	B	B	A
(e) River Corridor	High	A	A	C	C	A	B
(f) Community Disruption	High	A	B	B	C	A	C
FIELD WEIGHT AND SCORE	High	A	B	C	C	A	B
FIELD 2 DEVELOPMENT !MPLICATIONS							
(a) Water Supply	Low	A	C	A	B	C	A
(b) Sewer Services	Low	A	B	B	B	B	A
(c) Soil Capability	Medium	B	B	A	B	C	B
(d) Transportation	High	A	B	B	C	B	C
FIELD WEIGHT AND SCORE	Medium	A	B	B	B	B	B
FIELD 3 DEVELOPMENT STATUS							
(a) Existing Development	High	A	B	C	C	C	A
(b) Approved Official Plans	Medium	A	C	C	C	C	C
(c) Proposed Official Plans	Low	C	A	C	A	C	A
(d) Capital Work Forecast	Medium	A	C	C	C	C	A
(e) Public Land Assembly	High	C	C	C	C	A	C
(f) Private Land Assembly	Low	A	A	A	A	C	A
FIELD WEIGHT AND SCORE	Low	B	C	C	C	C	B
FINAL RATING		A	B	C	C	A	B

A – High Score
B – Medium Score
C – Low Score

AGRICULTURAL CODE OF PRACTICE FOR ONTARIO

Prepared by:

THE MINISTRY OF THE ENVIRONMENT
AND
THE MINISTRY OF AGRICULTURE AND FOOD

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AGRICULTURAL CODE OF PRACTICE FOR ONTARIO

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Introduction

Pollution is a matter of ever-increasing concern to all segments of our population. The problems created by pollution are usually complex and satisfactory solutions are difficult to achieve. Acceptable levels are hard to define and so, therefore, are proposals for pollution abatement.

Agriculture, like any other industry, must be aware of its contribution to the total pollution problem. Major areas of concern for agriculture are the odors and water-pollution potential associated with storage and utilization of animal manures.

Several factors have increased this concern recently.

- Significant increases in population have resulted in more people living closer together. This increase has also meant more urban people moving into a rural environment. Manure management on the farm affects all people living around that farm.
- There is an increasing trend toward more intensive livestock and poultry enterprises. Greater livestock numbers have not always been accompanied by comparable increases in acreages for manure utilization. More manure may be produced than can be used effectively in crop production and this surplus manure can create a disposal problem.
- The rapid growth in confinement rearing of livestock and poultry has not necessarily been accompanied by a parallel improvement in manure management methods. Certain manure systems may offer economic and labor advantages, but these advantages may be offset by increased problems of disagreeable odors. Further research is still required to reduce odor to an acceptable level.
- Some livestock and poultry enterprises have been established with little regard for neighboring residences and conversely some residential areas and individual homes have been allowed to develop in close proximity to existing livestock and poultry farms.

For all or many of these reasons, some serious odor and manure disposal problems have developed. Both the farmer and the nonfarming resident can be discomforted by the resulting air pollution.

It should be recognized that not all livestock and poultry operations present significant pollution cases. The pollution potential depends on the system of manure management and the overall farm management.

Until better manure management methods and manure treatment devices are developed, there are several key measures, which, if adopted, can minimize pollution problems. These include provision of

1. sufficient land area on which to spread the manure
2. sufficient manure storage capacity to hold the manure until it can be properly spread on the land at appropriate times
3. sufficient separation distances from livestock and poultry buildings and manure storages to neighboring dwellings
4. management guidance in keeping with existing knowledge on the storage, handling and use of animal manures
5. guidance for dead animal disposal.

During recent years, agriculture has demonstrated that, generally, it has been adopting a responsible and farsighted approach to these pollution problems. This has been brought about by the cooperation of individual farmers, farm organizations, municipal councils, the provincial government and agribusiness. Continuing application of this basic philosophy is required if agriculture is to meet its responsibility in the future.

The Environmental Protection Act, 1971, and its amendments were passed to provide a substantial measure of protection against all forms of pollution including offensive odors. This Act is administered by the Ontario Ministry of the Environment.

As a basis for cooperative action, this *Agricultural Code of Practice* has been developed in the form of guidelines which, when followed, should provide a reasonable, fair and satisfactory way of dealing with pollution problems. It is not intended that the contents of the *Agricultural Code* be adopted literally into legislation at any level of government.

PURPOSE OF THE AGRICULTURAL CODE OF PRACTICE

In the application of this *Code*, there are several points which should be clearly understood so that the *Code* can be translated into effective and reasonable farm practices and pollution control systems.

The purpose of the *Code* is:

to serve as a basis for assessing adequacy of design and operation of livestock and poultry farms with respect to pollution control.

to assist farmers in avoiding undesirable situations which could lead to legal disputes concerning pollution. Experience has indicated that farms operating within the *Agricultural Code of Practice* rarely create environmental problems and that legal action is seldom warranted. Farms operating within the provisions of the *Agricultural Code of Practice* may expect substantial support in the event of future environmental disputes.

to supply guidelines for the design of
(a) new livestock and poultry enterprises
(b) major renovations or expansion of existing facilities.

to serve as a basis for assessing existing livestock and poultry operations which do not contemplate change, or

to serve as a basis for the preparation of a comprehensive plan of farm operation with specific emphasis on manure management.

to be flexible enough in interpretation and application to cover special cases without being overly restrictive.

RECOMMENDED PROCEDURE FOR USING THE AGRICULTURAL CODE OF PRACTICE

A. Use in the farm community

1. (a) Based on the *Code*, Agricultural Engineers of the Ontario Ministry of Agriculture and Food are prepared to advise farmers on the design and layout of proposed new buildings, as well as renovations or expansion of existing facilities. Farmers are encouraged to take advantage of this advisory and planning service.

(b) The Ontario Ministry of Agriculture and Food is also prepared to advise farmers who desire to bring their existing operations into compliance with the *Code*.

2. Farmers are strongly encouraged to apply for a ***Certificate of Compliance*** from the Ontario Ministry of the Environment before commencing construction. Application forms are available at County and District Offices of the Ontario Ministry of Agriculture and Food as well as at the District Offices of the Ontario Ministry of the Environment. A list of offices is given on pages 18 and 19.

   A Certificate of Compliance is issued to all farmers whose premises and management practices are consistent with the requirements of the *Agricultural Code of Practice*. The continued validity of the Certificate is dependent upon fulfilment of the conditions specified in the Certificate and the implementation of the management practices recommended in the *Agricultural Code of Practice*.

3. The *Agricultural Code of Practice* will be used as a basis for assessing applications for a Certificate of Compliance. The guidelines will be interpreted with enough flexibility to allow for acceptance of alternative disposal methods. All applications will be received and assessed jointly by the Ministries of the Environment and Agriculture and Food.

4. The provisions of the *Code of Practice* apply to all sizes of livestock and poultry operations.

5. All complaints regarding pollution should be directed to the Ontario Ministry of the Environment.

6. Farmers with potential or existing pollution problems are encouraged to make use of the extension services of the Ontario Ministry of Agriculture and Food.

B. Use by Municipal Councils

Since Agricultural technology is changing rapidly, the *Agricultural Code of Practice* will be updated regularly as agricultural conditions change and, therefore, should not be adopted literally into legislation.

1. When municipal councils are considering land use planning or zoning changes, they are encouraged to consult with extension personnel of the Ontario Ministry of Agriculture and Food and to investigate all possible techniques to safeguard good agricultural operations. This consultation will involve the proper use and application of the *Agricultural Code of Practice*.

2. Municipal councils will be advised by the Ministry of the Environment of the names of farmers in their area who have received a Certificate of Compliance.

3. One of the significant factors in assessing an application for a Certificate of Compliance is the provision by the farmer of an adequate buffer zone between his livestock production unit and neighboring dwellings or other noncompatible land uses. Any interference with this buffer zone by subsequent land use changes will result in serious complications for continued agricultural use of that land.

The *Agricultural Code of Practice* suggests that municipal councils have a direct responsibility to maintain this buffer zone.

- Councils should require a Certificate of Compliance from all farmers erecting or enlarging livestock or poultry buildings.

- When considering applications for building permits, land severances, rezoning or any noncompatible use (for example private dwellings, recreational, commercial, etc.,) in an agricultural area, Councils should ensure that the building will not restrict the operation of established livestock or poultry facilities holding a Certificate of Compliance.

REQUIREMENTS OF THE AGRICULTURAL CODE OF PRACTICE

A. NEW AND EXISTING BUILDINGS AND PRODUCTION FACILITIES

1. *New Buildings*

All the requirements of the *Code* apply to new livestock and poultry units.

2. *Renovation and Expansion of Existing Facilities*

All the requirements of this *Agricultural Code* apply to changes of existing facilities.

If the expansion involves a new structure, which is entirely separated from existing buildings, every attempt should be made to locate within the distance requirements of the *Agricultural Code*. However, if this is not practical or possible, then alternative arrangements should be discussed with the Agricultural Engineer to see if they compensate sufficiently for shortages in distance. Barn extensions also fit into this category.

3. *Existing Livestock and Poultry Operations Not Contemplating Remodelling or Expansion*

Any farmer wishing to apply for a Certificate of Compliance can do so and the farm will be assessed according to the requirements of the *Code*. all the requirements apply. Again, existing shortages may be compensated for by satisfactory alternatives but these should be discussed with the Agricultural Engineer.

B. RECOMMENDED LAND AREAS FOR MANURE UTILIZATION

This *Agricultural Code* is based on the concept that all manure should be returned to the land to grow more crops. Land has the ability to accept a reasonable amount of manure without creating problems. However, it must be emphasized that land can safely accept only so much manure without increasing the potential for water pollution. Further research may suggest alternative methods of manure utilization and disposal.

This *Code* recognizes that there is considerable variation in manure quantity and quality due to type of livestock, type of feed and type of manure system used. Farmers are encouraged to have an analysis of the manure made at the University of Guelph. With this information, more specific answers on manure utilization can be given.

Explanation of Tables I and II

The following tables have been established with due regard to the pollution potential of phosphorus, potash and particularly the nitrogen content of manure. The movement of nitrogen in the soil is of great concern and was a prime consideration in the development of these tables.

1. The Animal Unit System equates different types of livestock and poultry according to the pollution potential of the manure. The number of animal units can be determined from Table I. This number is transferred to *Table* II to find the minimum acreage required to minimize pollution.

2. Recommended acreages refer to land in crop production that can be used for spreading of manure.

3. Acreages shown are the minimum necessary to avoid pollution, not necessarily the most economical for crop production. When more efficient use of manure is required, greater acreages should be considered. The Ontario Ministry of Agriculture and Food can provide information on this subject. the best information can be given about manure which has been analyzed, also taking into account such factors as soil type and crops.

4. Minimum acreages are those required to avoid the risk of groundwater pollution by compounds of nitrogen.

5. All calculations for animal units should be based on total livestock numbers for the complete year.

6. For new livestock and poultry operations, a minimum of 40 acres at the farm site is strongly recommended. On acreages less than 40 acres, distance requirements are difficult to meet and compensatory alternatives will have to be considered. These include such items as converting to dry manure, no outside manure storage or manure storage at another site. Alternatives should be checked by the Agricultural Engineer of the Ontario Ministry of Agriculture and Food.

7. Manure may be spread on leased land or on a neighboring farm. However, consideration must be given to a satisfactory agreement with the neighbor

TABLE I ANIMAL UNITS OF PRODUCTION AS BASIS FOR ACREAGE REQUIREMENTS

Type of Livestock or Poultry	Annual Basis (365 Days)
1 dairy cow (plus calf)	1 animal unit
1 beef cow (plus calf)	1 animal unit
1 bull	1 animal unit
1 horse	1 animal unit
4 sheep (plus lambs)	1 animal unit
4 sows (plus litter to weaning)	1 animal unit
125 laying hens	1 animal unit
100 female mink (plus associated males & kits)	1 animal unit
	Market Basis (as marketed)
2 beef feeders (gain 400-1100 lb)	1 animal unit
4 beef feeders (gain 400-750 lb)	1 animal unit
4 beef feeders (gain 750-1100 lb)	1 animal unit
15 hogs (gain 40-200 lb)	1 animal unit
1000 broiler chickens or roasters (4-5 lb)	1 animal unit
300 turkey broilers (11-12 lb)	1 animal unit
150 heavy turkey hens (19-20 lb)	1 animal unit
100 heavy turkey toms (30-32 lb)	1 animal unit
40 veal calves (gain 90-300 lb)	1 animal unit
300 pullets	1 animal unit

to receive this manure on a continuing basis and at specific times during the year.

8. Complete design information is not given in this Code. The following publications are suggested for resource information on design:

Canadian Code for Farm Buildings, 1970
Livestock Waste Management and Pollution Abatement, 1971 - A.S.A.E.
Canada Animal Waste Management Guide, 1972

TABLE II MINIMUM ACREAGE FOR LIVESTOCK OR POULTRY MANURE UTILIZATION

Number of Animal Units	Loam to Clay Soil	Sandy Soil
30 - 40 animal units	20 acres	30 acres
41 - 60 animal units	30 acres	45 acres
61 - 80 animal units	40 acres	60 acres
81 - 100 animal units	50 acres	75 acres
101 - 120 animal units	60 acres	90 acres
121 - 140 animal units	70 acres	105 acres
141 - 160 animal units	80 acres	120 acres
161 - 180 animal units	90 acres	135 acres
181 - 200 animal units	100 acres	150 acres
201 - 220 animal units	110 acres	165 acres
221 - 240 animal units	120 acres	180 acres
241 - 260 animal units	130 acres	195 acres
261 - 280 animal units	140 acres	210 acres
281 - 300 animal units	150 acres	225 acres
301 - 320 animal units	160 acres	240 acres
321 - 340 animal units	170 acres	255 acres
341 - 360 animal units	180 acres	270 acres
361 - 380 animal units	190 acres	285 acres
381 - 400 animal units	200 acres	300 acres

Sample Problem: A farmer on loam soil proposes to build a new hog feeder barn to house 600 hogs at one time. Annual marketings will be approximately 1500 hogs.

Solution: Refer to Table I.

$$1500 \text{ hogs} = \frac{1500}{15} = 100 \text{ animal units}$$

Refer to Table II.
100 animal units require 50 acres of crop land on which to spread the manure.

C. SEPARATION DISTANCES

The objectionable effect of odors in a neighborhood can be reduced if livestock and poultry facilities are located as far as is practically possible from neighboring dwellings. A decision about separation distances can be made only once – when a new building is erected. Therefore, careful planning is necessary to accommodate both present and future requirements.

The intensity of odor from the building and the manure storage relates closely to separation distance. Odor intensity is affected by type of livestock or poultry, feeding program, moisture content of the manure and atmospheric conditions. It is difficult to obtain a realistic odor level measurement.

Distances suggested below are for *untreated* manure. When satisfactory aeration or treatment devices are installed, these distances may be reduced. Special consideration will be given to reducing distances for systems using dry manure.

Proper site planning now can reduce potential problems in future.

Distance Requirements

See sketch on page 17.

(a) New livestock and poultry buildings and manure storage facilities should be:

1. at least 2000 feet from land presently zoned for residential use
2. at least 1000 feet from dwelling on adjacent property
3. at least 300 feet from the center line of any public road
4. at least 200 feet from the lot lines of the site on which the production unit is situated.

(b) Major renovations or enlargement of existing facilities

The same distances apply as in section (a). Consideration will be given to such factors as existing building location and the need to centralize the operation. In certain cases, it may be possible to receive a Certificate of Compliance for the expansion but not for the existing facilities.

D. MANURE HANDLING SYSTEMS

It is extremely important that careful planning and sound management be applied to the operation of manure handling systems. The design of the manure system is as important as the design of the building. Farmers are encouraged to seek advice from their Agricultural Engineer before deciding on any design. There are no cheap or low-cost manure systems. All manure storages should be designed and located to protect water wells from contamination.

The following restrictions do not apply to dry, relatively non-odorous, well-rotted manure applied as a mulch and fertilizer at the base of fruit trees or to manure that has been aerated sufficiently to reduce odors to an acceptable level.

Solid Manure System

For handling solid manure, the requirements are:

1. Unless solid manure can be incorporated within 24 hours, or sooner when necessary, it should not be spread closer than 600 feet from a neighbor's house.
2. Solid manure storages should be designed and managed to keep pollution problems to a minimum. The manure should be kept as dry as possible. This means keeping rainfall from the storage. All liquid effluent containing manure *must* be contained at the site by dykes or retaining walls. *Under no conditions* can this liquid effluent be allowed to get into streams or watercourses.
3. Sufficient storage capacity for six months' accumulation of manure should be provided.
4. Feedlots and paved yards should be designed to retain near the site all liquid effluent containing manure. The following procedures should minimize volume of effluent:
   - Install eavestroughs on all barns to keep roof water from yards.
   - Divert all outside drainage away from feedlot by dykes, ditches or drains.
   - Keep yards as clean as possible to reduce the amount of manure carried by runoff waters.
   - Consider roofing-in a portion of the lot to keep out rainfall.
5. Where possible, manure should be spread while wind conditions are favorable to direct odors away from nearby receptors.

Liquid Manure System

If a liquid manure system is to be used, the requirements are:

1. Sufficient storage capacity for at least 6 months' accumulation of manure should be provided. Any deviation from this requirement will be evaluated by the Agricultural Engineer of the Ministry of Agriculture and Food, considering such factors as geographic area, climate and cropping program.

2. Where untreated liquid manure is spread on land within 1000 feet of neighboring dwellings, *it must be incorporated into the soil as soon as possible*, certainly within 24 hours. The timing requirement depends on a number of factors such as weather conditions, actual distance to neighbors and intensity of odor.

   Incorporation can be accomplished by:

   (a) plow-down

   (b) discing or

   (c) a liquid manure injection attachment.

   The liquid manure must be *completely* covered by the soil and not left in open furrows.

3. Due consideration should be given to potential odor problems when spreading liquid manure.

   - Complete spreading of manure in as short a period as possible in order not to prolong the production of odors.
   - Take advantage of climatic and atmospheric conditions when spreading.

4. It is extremely important that everyone appreciate the potential hazards of liquid manure storage.

   - All liquid in-ground storages must be protected by a permanent top or at least a safety fence.
   - Liquid manure that has not been aerated generates gases such as methane, hydrogen sulfide, ammonia and carbon dioxide. Concentrations of these gases can present a hazard to both human and animal life. *Good ventilation of buildings and tanks is a must when pumping.* Never enter a liquid manure tank unless you are sure there is sufficient oxygen and unless you have a helper outside the tank.

5. It is important to recognize all possible hazards of storing liquid manure in excavated ponds with earth sides. These are:
   - erosion of banks by rainfall and during agitation of liquids.
   - the necessity for safety precautions such as construction of safety fences and an adequate pumping platform.
   - ground and surface water pollution potential if soil is not impermeable.

Manure Lagoons

For purposes of the *Code of Practice*, a lagoon is defined as a liquid manure storage facility in an excavated area with earth sides or dykes, designed to provide some treatment for the manure.

Not very many lagoons on farms in Ontario have been successful. The design of a lagoon is critical and should be done by competent designers. Typical problems with lagoons have included:

- improper design
- odor production
- improper sealing
- undesirable aesthetics
- lack of a safety fence.

There are two basic types of lagoons:

Aerobic Lagoons

A lagoon may be aerobic because there is sufficient surface area or because aeration devices have been installed. It is acceptable from the point of view of pollution but usually unacceptable because of cost.

Anaerobic Lagoons

Anaerobic bacterial activity reduces solids but results in the production of foul smelling gases such as hydrogen sulfide. Anaerobic lagoons are generally not acceptable, except in very isolated areas.

E. MANURE SPREADING DURING WINTER AND SPRING

All farmers should be particularly concerned about the pollution potential of indiscriminate spreading of manure. The greatest fertility value for manure is realized when manure is stored properly and incorporated into the soil after spreading. This practice reduces odor problems and guards against runoff.

There are two main causes of runoff:

1. melting snow or heavy rain washing the manure downhill into streams, watercourses, or tile catch basins.
2. spreading manure too close to a stream or watercourse.

Losses of manure due to runoff depend upon such factors as:

- whether the ground is frozen and/or snow-covered
- the slope of the land
- the amount and type of crop cover
- the soil type
- the amount of rainfall.

Since many factors may influence the amount of runoff, the decision on where and when to spread should be wisely made. Experience will indicate which fields are subject to runoff and these fields should be left until the spring melt has taken place. Relatively flat fields, not subject to runoff or flooding problems, should be chosen for winter or early spring spreading. When manure must be piled for future spreading, sites should be selected that are reasonably level, away from watercourses and not subject to flooding.

The importance of a properly constructed storage facility with at least 6 months' capacity cannot be overemphasized for the proper handling of manure during winter months. This capacity allows the farmer to spread manure when and where it is most beneficial for crop production and is less apt to create a pollution problem.

F. DEAD ANIMAL DISPOSAL

Facilities for dead animal disposal must be properly designed and operated. There are five basic systems in use in Ontario.

1. *Pickup by a licensed dead stock carrier.* This service is available for large animals but is not always provided for small animals and poultry.

2. *Storage of small animals or poultry in a freezer* until numbers are sufficient for pickup by a rendering plant.

3. *Disposal site on your own farm.* There are basically two types available:

   (a) *Disposal Pit*

   The pit should be covered with a tight-fitting lid and locking device. It should be located at least 150 feet from any well or spring
   Size requirements are: Broilers - 20 cu ft/1000 birds
   Layers - 100 cu ft/1000 birds

   (b) *Temporary trenches or pits* (for summer use only)

   Earth is backfilled over the birds each time additions are made At least two feet of soil should be placed over the birds.

4. *Sanitary land-fill site.*

5. *Incineration.* Dead animals can be suitably disposed of in properly designed incinerators. A Certificate of Approval must first be obtained from the Air Management Branch for each installation. Such approval is required under the provision of the Environmental Protection Act, 1971 and amendments thereto. Application forms and copies of the Act are available at Air Management Branch district offices (listed on page 19).

   A properly designed incinerator will provide sufficient capacity and ensure that resulting emissions are within standards set by the legislation. In order to incinerate dead animals, the unit will normally require two burners which operate with gas or No. 2 fuel oil.

   The most common problems with improperly designed units are smoke and odor emission.

THE DISPOSAL OF DEAD ANIMALS BY OPEN BURNING IS COMPLETELY UNACCEPTABLE.

G. MANAGEMENT FACTORS

It should be emphasized that the farmer should take advantage of all local conditions to minimize pollution. The need for good public relations cannot be overemphasized. Manure should be spread where it will cause least inconvenience or nuisance to everyone concerned.

Proper equipment, capable of avoiding spillage or leakage during transport, is a must when using public roads. Again, emphasis should be placed on taking advantage of weather conditions.

Good sanitation and fly control around buildings and manure storages are a necessity. General farmstead appearance can have a bearing on the attitude of the community. Visual screening of exposed manure storages is well worth considering.

Reduction of odor levels can also be accomplished by the proper design and use of a ventilation system in the buildings. In-house drying of manure should be considered to keep odor levels acceptable.

The local climate and topographic conditions on the site should also be considered when choosing a site for new facilities and designing the ventilation layout.

Summary

Adoption of the requirements in this *Code of Practice*, together with careful planning, good manure management practices, and consideration for the rights of everyone, should considerably reduce the risk of pollution problems in the future. Previous experience with the *Code of Practice* has demonstrated that this combination is effective in maintaining an acceptable environment.

Before beginning construction, the owner should ensure that the requirements of all authorities have been satisfied.

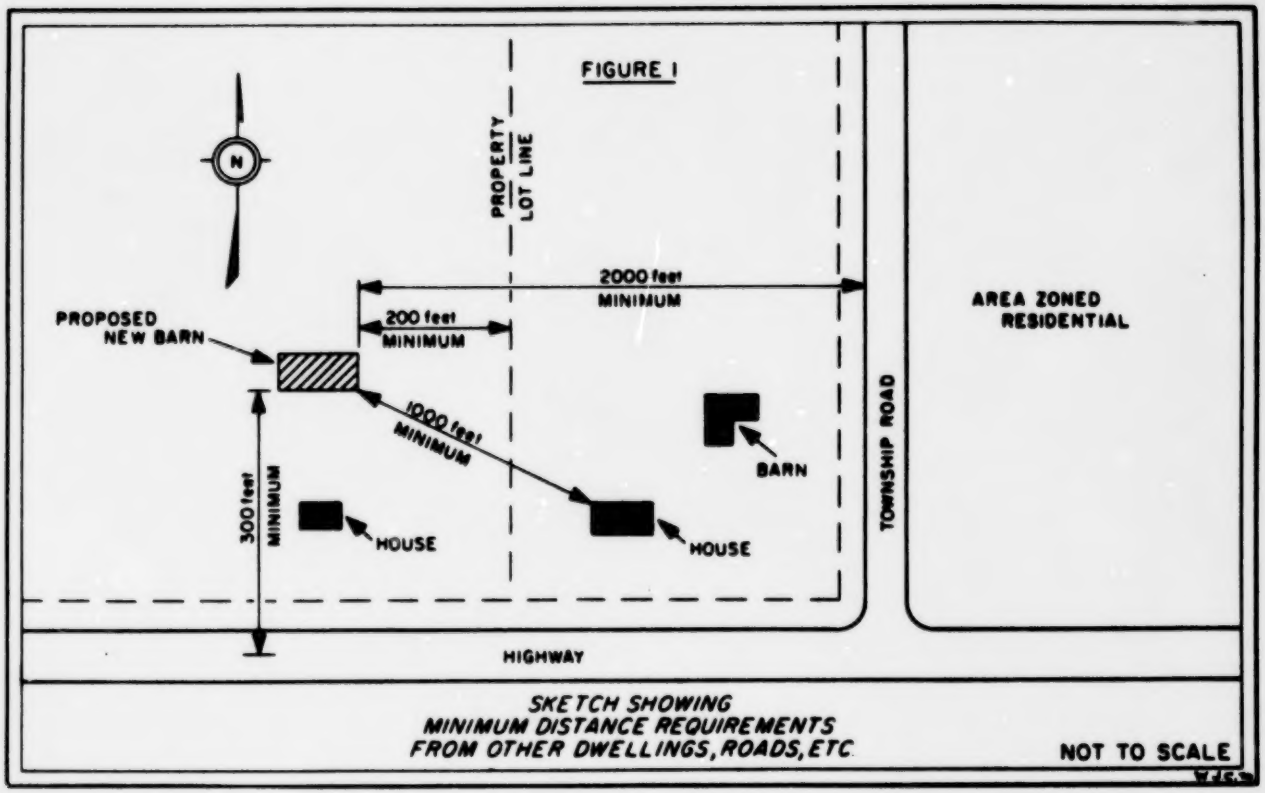


FIGURE 1
N
PROPERTY LOT LINE
2000 feet MINIMUM
200 feet MINIMUM
PROPOSED NEW BARN
1000 feet MINIMUM
300 feet MINIMUM
BARN
HOUSE
HOUSE
TOWNSHIP ROAD
AREA ZONED RESIDENTIAL
HIGHWAY
SKETCH SHOWING
MINIMUM DISTANCE REQUIREMENTS
FROM OTHER DWELLINGS, ROADS, ETC.
NOT TO SCALE

Excerpt from "Land Use in the Vicinity of Airports" S-72-8

CANADIAN AIR TRANSPORTATION ADMINISTRATION
CIVIL AERONAUTICS BRANCH
AVIATION PLANNING AND RESEARCH DIVISION

REVISED 1972

PART IV
AIRCRAFT NOISE

An accurate assessment of the annoyance resulting from exposure to aircraft noise is essential to both aviation planners and those responsible for directing the nature of development of lands adjacent to airports.

This Part will discuss noise measurement, annoyance prediction and the Noise Exposure Forecast, and contains an assessment of various Land Uses in terms of their compatibility with aircraft noise.

Enquiries relating to this Part should be directed to the appropriate Regional Controller, Civil Aviation Branch, of the Ministry of Transport.

Noise Measurement

The measurement of the sound pressure level created by an aircraft (or any other noise source), can be accomplished with a sound level meter which senses pressure fluctuations over an extremely short time interval. Sound pressure level (SPL), quoted in **decibel units (dB)**, is actually a measure of relative sound power at the receiver. The decibel scale is logarithmic, i.e., an increase of 10dB represents a doubling of the sound pressure level.

A particular sound signal may be comprised of several different frequencies to which the human ear may respond in various ways. In order that noise measurements may relate more closely to loudness as judged by the average person, sound meters are equipped with weighting networks which make use of information related to the frequency response characteristics of the human ear. Most sound level meters have the capability of reading on A, B, C, and D scales, and decibel values are correspondingly indicated as dB(A), dB(B), dB(C) or dB(D), according to the weighting network used. The dB(D) value is the preferred measuring unit for aircraft noise.

The unit known as the **Perceived Noise Decibel (PNdB)** provides a frequency weighting system which attempts to more closely approximate the subjective reaction of the human ear to an aircraft noise stimulus. Although weighting networks are available which provide a means of directly measuring approximate PNdB values, i.e. dB(D), true PNdB values are determined by the analysis and treatment of sound pressure levels in various octave or ⅓ octave bands.

In recent years, a more sophisticated noise level unit, the **Effective Perceived Noise Decibel (EPNdB)** has been developed specifically for use in the measurement of aircraft noise. This unit is basically similar to the PNdB except that corrections have been applied to account for the effects of discrete tones and the duration of the noise disturbance: factors which are annoying to the listener.

Predicting Annoyance

In addition to the annoying characteristics of an individual noise signal, overall subjective reaction to noise is dependent on the number of times the disturbance occurs as well as the daily distribution of these events. These factors must be included in any noise forecasting system if it is to be applicable to the community situation. The Noise Exposure Forecast (NEF) system used by the Canadian Air Transportation Administration is capable of handling all of these factors.

The NEF system provides for the summation of noise from all aircraft types operating at an airport based on actual or forecast aircraft movements by runways and the time of day or night the events occur. The large number of mathematical calculations necessary for the construction of NEF contours requires the use of computer techniques for the practical application of this system.

Community Response to Noise

During development work on preliminary noise rating systems, it was established that community response to aircraft noise could be correlated well with the noise contours then in use. Case histories of noise complaints at twenty-one airports were analyzed as to severity, frequency (of complaint), and distribution around the airports to establish a relationship with known noise values. The results of this work, which may be found in Table 2, have been used for relating land uses to NEF zonal areas.

The analysis of the effect of aircraft noise on various working and living environments is a complex matter. For each case where there is a note in the Land Use Table, (Table 3), it is desirable that a noise environment analysis or a noise reduction requirement analysis be undertaken, since each note denotes a particular specialized problem. Many of the factors that would be considered in such analysis are subject to changing technology. Also, the attitudes of those subjected to the noise environment are subjective and varied. Since these factors are under constant review, authorities undertaking analyses of noise environments and noise reduction requirements in buildings should maintain liaison with agencies conducting these reviews. At the present time, such agencies include: the National Research Council, Division of Building Research; and the Canadian Air Transportation Administration.

TABLE 2

COMMUNITY RESPONSE PREDICTION

RESPONSE AREA		RESPONSE PREDICTION*
1	(over 40 NEF)	Repeated and vigorous individual complaints are likely. Concerted group and legal action might be expected.
2	(35-40 NEF)	Individual complaints may be vigorous. Possible group action and appeals to authorities.
3	(30-35 NEF)	Sporadic to repeated individual complaints. Group action is possible.
4	(below 30 NEF)	Sporadic complaints may occur. Noise may interfere occasionally with certain activities of the resident.

*It should be noted that the above community response predictions are generalizations based upon experience resulting from the evolutionary development of various noise exposure units used by other countries. For specific locations, the above response areas may vary somewhat in accordance with existing ambient or background noise levels and prevailing social, economic, and political conditions.

TABLE 3

LAND USE TABLE
AIRCRAFT NOISE CONSIDERATIONS ONLY

This land use tabulation should not be considered as an exhaustive listing, but merely as examples of how various land uses would be assessed in the Noise Exposure Forecast zones in terms of community response predictions.

No	– Indicates that new construction or development of this nature should not be undertaken
A	– This particular land use may be acceptable in accordance with the appropriate note and subject to the limitations indicated therein.
Yes	– The indicated land use is not considered to be adversely affected by aircraft noise and no special noise insulation should be required for new construction or development of this nature.

Noise Exposure Forecast Values	>40	40-35	35-30	<30
Responses Areas	1	2	3	4
LAND USE				
Residential				
Detached and Semi-Detached			B	A
Town Houses, Garden Homes			B	A
Apartments			B	A

Noise Exposure Forecast Values	> 40	40-35	35-30	< 30
Response Areas	1	2	3	4
Public				
Schools	NO	NO	D	C
Churches	NO	NO	D	C
Hospitals	NO	NO	D	C
Nursing Homes	NO	NO	D	C
Auditoriums	NO	NO	D	C
Libraries	NO	NO	D	C
Community Centres	NO	NO	D	C
Cemeteries	N	N	N	N
Municipal Utilities				
Electric Generating Plants	Yes	Yes	Yes	Yes
Gas and Oil Storage	Yes	Yes	Yes	Yes
Garbage Disposal	Yes	Yes	Yes	Yes
Sewage Treatment	Yes	Yes	Yes	Yes
Water Treatment	Yes	Yes	Yes	Yes
Water Storage	Yes	Yes	Yes	Yes

Noise Exposure Forecast Values	>40	40-35	35-30	< 30
Response Areas	1	2	3	4
Recreational — Outdoor				
Athletic Fields	[illegible]	J	K	Yes
Stadiums	[illegible]	[illegible]	K	Yes
Theatres — Outdoor	[illegible]	[illegible]	[illegible]	H
Racetracks — Horses	[illegible]	K	K	Yes
Racetracks — Autos	Yes	Yes	Yes	Yes
Fairgrounds	K	K	Yes	Yes
Golf Courses	Yes	Yes	Yes	Yes
Beaches and Pools	Yes	Yes	Yes	Yes
Tennis Courts	[illegible]	K	Yes	Yes
Playgrounds	K	K	Yes	Yes
Marinas	Yes	Yes	Yes	Yes
Camping Grounds	[illegible]	[illegible]	[illegible]	H
Parks and Picnic Areas	[illegible]	K	Yes	Yes
Commercial				
Offices	F	E	D	Yes
Retail Sales	F	D	Yes	Yes
Restaurants	F	D	D	Yes
Indoor Theatres	[illegible]	G	D	Yes
Hotels & Motels	[illegible]	F	G	Yes
Parking Lots	Yes	Yes	Yes	Yes
Gasoline Stations	Yes	Yes	Yes	Yes
Warehouses	Yes	Yes	Yes	Yes
Outdoor Sales	E	K	Yes	Yes

Noise Exposure Forecast Values	>40	40-35	35-30	<30
Response Areas	1	2	3	4
Industrial				
Factories	I	I	Yes	Yes
Machine Shops	I	I	Yes	Yes
Rail Yards	Yes	Yes	Yes	Yes
Ship Yards	Yes	Yes	Yes	Yes
Cement Plants	I	I	Yes	Yes
Quarries	Yes	Yes	Yes	Yes
Refineries	I	I	Yes	Yes
Laboratories		D	Yes	Yes
Lumber Yards	Yes	Yes	Yes	Yes
Saw Mills	I	I	Yes	Yes
Transportation				
Highways	Yes	Yes	Yes	Yes
Railroads	Yes	Yes	Yes	Yes
Shipping Terminals	Yes	Yes	Yes	Yes
Passenger Terminals	D	Yes	Yes	Yes

Noise Exposure Forecast Values	>40	40-35	35-30	<30
Response Areas	1	2	3	4
Agricultural				
Crop Farms	Yes	Yes	Yes	Yes
Market Gardens	Yes	Yes	Yes	Yes
Plant Nurseries	Yes	Yes	Yes	Yes
Tree Farms	Yes	Yes	Yes	Yes
Livestock Pastures	M	Yes	Yes	Yes
Poultry Farms	L	L	Yes	Yes
Stockyards	M	Yes	Yes	Yes
Dairy Farms	M	Yes	Yes	Yes
Feed Lots	M	Yes	Yes	Yes
Fur Farms	M	M	M	M

EXPLANATORY NOTES

It is important to understand that the locations of the lines between noise zones cannot be fixed exactly. It will therefore be necessary for the responsible public authority to make an appropriate interpretation of what regulations are to be made applicable at a specific location.

In cases where reference is made to a detailed on-site noise analysis, or to peak noise levels, it will be appreciated that the notes are intended to apply specifically at existing airports, where a field assessment is possible. For planning with respect to new airports, such zones should be considered cautionary. Before reaching a final decision with respect to permitting the particular land-use in question, the authority may wish to consider local topographic effects and ambient noise levels, in conjunction with generalized peak noise level "foot-prints" for the predominant aircraft types to be using the new airport.

Users are reminded that the NEF contours prepared by Canadian Air Transportation Administration for existing airports will, where feasible, be based on aircraft traffic forecasts. Dut to the pending introduction of larger and quieter aircraft types at existing major airports, and the fact that these airports are already handling a relatively high volume of aircraft traffic, the NEF contours prepared for these airports are considered to represent a "plateau" in the augmentation of aircraft noise exposure. This principle cannot be applied with equal confidence at the intermediate and smaller airports. At these airports, it is recommended that local planning authorities may wish to consider NEF contours as a forecast of noise exposure for the stated forecast period, and thus apply somewhat more restrictive land-use planning criteria where they may desire a significant long-range expansion of activities at the particular airport location in question. In all cases, it is recommended that discussions should take place between the appropriate planning authority and Regional MOT planning officials, in order that long-range planning for community development may be undertaken with an appreciation for the implications of possible alternatives for airport expansion in the long term.

A. A marginal zone exists near the 30 NEF level where aircraft noise may begin to annoy some residents. It is recommended that developers be made aware of this fact and that they undertake to so inform prospective tenants or purchasers of residential units. In addition, it is suggested that development should not proceed until the responsible authority is satisfied that noise insulation features, if required, have been considered in the building design.*

B. The developer should be required to inform prospective tenants or purchasers of residential units that aircraft noise may interfere with certain activities. Construction should not be permitted to proceed until the responsible authority is satisfied that appropriate noise insulation features have been considered in the building design.*

C. These facilities should not be located close to the 30 NEF contour unless the restrictions outlined in Note D are applied.

D. These uses should not be approved unless a detailed analysis is conducted and the required noise insulation features are considered by the architectural consultant responsible for building design.

E. When associated with a permitted land use, an office may be located in this zone provided that all relevant factors are considered and a detailed analysis is conducted to establish the noise reduction features required to provide an indoor environment suited to the specific office function.

F. It is recommended that this specific land use should be permitted **only** if related directly to aviation-oriented activities or services. Conventional construction will generally be inadequate and special noise insulation features should be included in the building design.

G. Generally, these facilities should not be permitted in this zone. However, where it can be demonstrated that such a land use is highly desirable in a specific instance, construction may be permitted to proceed provided that a detailed analysis is conducted and the required noise insulation features are included in the building design.

H. Facilities of this nature should not be located close to the NEF 30 contour unless a detailed noise analysis has been conducted.

I. Many of these uses would be acceptable in all NEF zones. However, consideration should be given to internally generated noise levels, and acceptable noise levels in the working area.

J. Undesirable if there is spectator involvement.

K. It is recommended that serious consideration be given to an analysis of peak noise levels and the effects of these levels on the specific land use under consideration.

L. The construction of covered enclosures should be under-taken if this use is to be newly introduced to the noise environment. (See Note M).

M. Research has shown that animals condition to high noise levels. However, it is recommended that peak noise levels be assessed before this use is allowed.

N. This appears to be a compatible land use in all NEF zones.

* The Division of Building Research, National Research Council, working in conjunction with Central Mortgage and Housing Corporation and the Canadian Air Transportation Administration has developed a technique for selecting residential building components based on NEF values. This information is to be published as an Appendix to CMHC's Site Planning Handbook. Authorities are referred to this document for assistance in determining appropriate noise insulation features for a particular residential development.

Aircraft Noise References

— A description of the CNR and NEF Systems for Estimating Aircraft Noise Annoyance. R-71-20. Ministry of Transport Kingston, Beaton, Rohr, 1971

— New Housing and Aviation Noise NHA 5059. Central Mortgage and Housing Corporation, 1972.

Ministry of the Environment,
Air Management Branch,
May 1973.

GUIDELINES FOR DEVELOPMENT ALONG EXPRESSWAYS

Over the years the increase in use of cars and vehicles for the transport of goods has led to the construction of multi-lane highways and expressways. Where these roads go through rural or thinly populated areas they affect few people but in urban areas the noise generated by the traffic on them can be a problem to many. Therefore, the use of the land adjacent to heavily travelled roads requires special consideration.

It has been established by a number of investigators that if the L_{10} noise level does not exceed 55-59 dBA that the majority of people in single family residential areas find the noise situation satisfactory. L_{10} means that this noise level is exceeded only 10% of the time. Therefore, it is recommended that the L_{10} level of noise from traffic at single family and low density dwelling not exceed 56 dBA.

The noise generated by traffic on expressways varies with a number of factors, one of them being the number of lanes. Readings taken adjacent to the MacDonald Cartier Freeway along its route through Toronto have shown L_{10} values of 53-59 dBA at distances greater than 1200 feet from 4 lane sections and in the range of 60 dBA at distances up to 1200 feet from 12 lane sections. An increase of 6 dBA represents approximately a doubling of the intensity of the noise. The L_{10} value at any specific distance from an expressway varies with the intervening topography and the existence or otherwise of noise barriers such as: walls, earth berms, high thick vegetation, buildings.

Though the noise from expressways can be satisfactorily attenuated by distance alone this is not always a practical solution. Though low density housing should not be located immediately adjacent to expressway right of ways, the distance required to reduce the noise to satisfactory levels can be substantially reduced by interposing earth berms, depressing the roadway, walls, and other intervening land use such as commercial, high density, industrial.

Though it is uneconomical to soundproof low density housing, and noise would still intrude into the gardens or yards, apartment houses, schools, office buildings, etc., may be constructed to reduce the effect of noise from adjacent expressways. This may be done by:

(a) Full airconditioning

(b) Proper orientation of the building in activity areas

(c) Proper window sizing and location

(d) Specially designed balconies.

In planning land use adjacent to expressways, two factors should be considered:

(1) a future increase in traffic density and consequent increase in the number of lanes

(2) the fact that it will be some years before the noise generated by moving vehicles will be substantially reduced by technological advances in automotive design

The staff of the Air Management Branch, Ministry of the Environment are available to give advice on reducing the effect of noise from expressways.

Air Management Branch
Ministry of the Environment
May, 1973.

APPENDIX "E"

CODE OF MANAGEMENT PRACTICE

DEFERRED BY THE MINISTER #2 (ALL)

APPENDIX F

GUIDELINES RE ENERGY CONSERVATION MEASURES IN PLANS OF SUBDIVISION AND PLANS OF CONDOMINIUM

The various matters discussed below will be considered as appropriate in the review of plans of subdivision and plans of condominium. It is recognized that all of the matters are not equally applicable to the various kinds of plans or even to every proposal within a certain category. As an example, provision of neighbourhood facilities and of collector roads to carry transit may be irrelevant to a small subdivision proposal.

When assessing conformity with the policy in Section 2.4.1 (ii) 6 which requires 'good opportunity for developing south facing buildings', the following matters will be considered:

1. Street Orientation

   The preferred orientation for local streets is within 25 degrees of a true east-west axis. It is recognized that there is less flexibility for the location of collectors and arterials.

2. Lot Orientation

   Lots oriented within 25 degrees of a true north-south axis will be considered to provide good opportunity for developing south-facing buildings. It is anticipated that at least 65% of the lots on local streets will have the desired orientation.

   Orientation east of south is preferred to orientation west of south, (morning sun is desirable to warm a house which has cooled over night; afternoon sun may contribute to over heating).

   Use of slanted lot lines may achieve the desired orientation of lots when the street orientation is unsatisfactory.

3. Location of Higher Density (taller than 3 storeys) Development

   Blocks of land intended for higher density (taller than 3 storeys) development should be located to minimize shading of lower density development.

   In some instances a location which minimizes shading may not be the best location with regard to transit and other forms of travel. In this case transit considerations should prevail.

4. Other

   Other methods, such as innovative lotting schemes, will also be considered when assessing the provision of solar access. The emphasis is on the provision of south wall solar access, not on any particular technique. Generally, north-south separation between buildings approximately equal to that provided by use of east-west streets will be satisfactory.

Orientation requirements will not be applied to plans on north-facing slopes of 5% or greater.

Use of attached housing types in locations where satisfactory orientation is not possible will be considered a positive feature in assessing proposals.

Constraints such as topography (e.g. ravines) and parcel configuration will be recognized in the assessment of solar access provision.

When assessing conformity with energy conservation policies with respect to transportation in sections 2.4.1 (ii) 6 and 3.1.3.4 (3) the following matters will be considered:

1. Provision of neighbourhood facilities

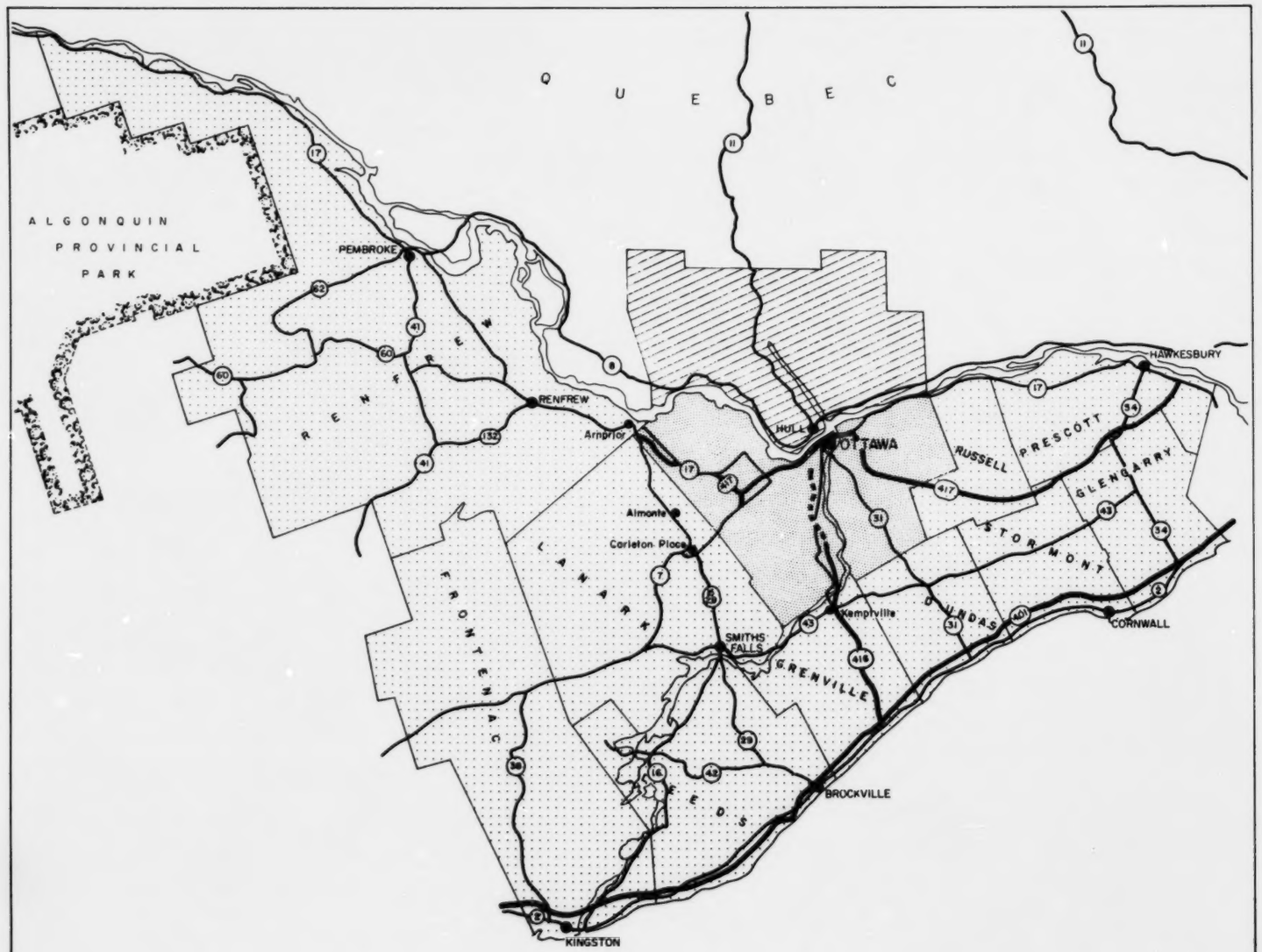
   Neighbourhood facilities include both commercial and community uses (schools, parks, daycare centres). Both provision for these uses and their relative locations within proposed plans of subdivision will be considered within the context of any relevant local official plan, secondary plan, or development plan policies.

2. Transit

   The adequacy of provision for transit will be assessed by the Regional Transportation Department, using the "Transit Servicing of New Urban Areas: Guidelines for Development."

3. Pedestrian and Bicycle Facilities

   Where available, requirements for pedestrian and bicycle facilities in proposed plans of subdivision will be based on overall plans for such facilities in local official plans, secondary plans or development plans. In the absence of overall plans, proposals will be examined for opportunities to reduce trip lengths to destinations such as schools and neighbourhood commercial facilities by provision of key links or use of the open space system.
   [OPA #34, 9 MAY, 1983. APPENDIX F ALL]



OTTAWA — CARLETON REGIONAL SETTING

LE CONTEXTE RÉGIONAL D'OTTAWA — CARLETON

REGIONAL MUNICIPALITY OF OTTAWA-CARLETON — MUNICIPALITÉ RÉGIONALE D'OTTAWA-CARLETON

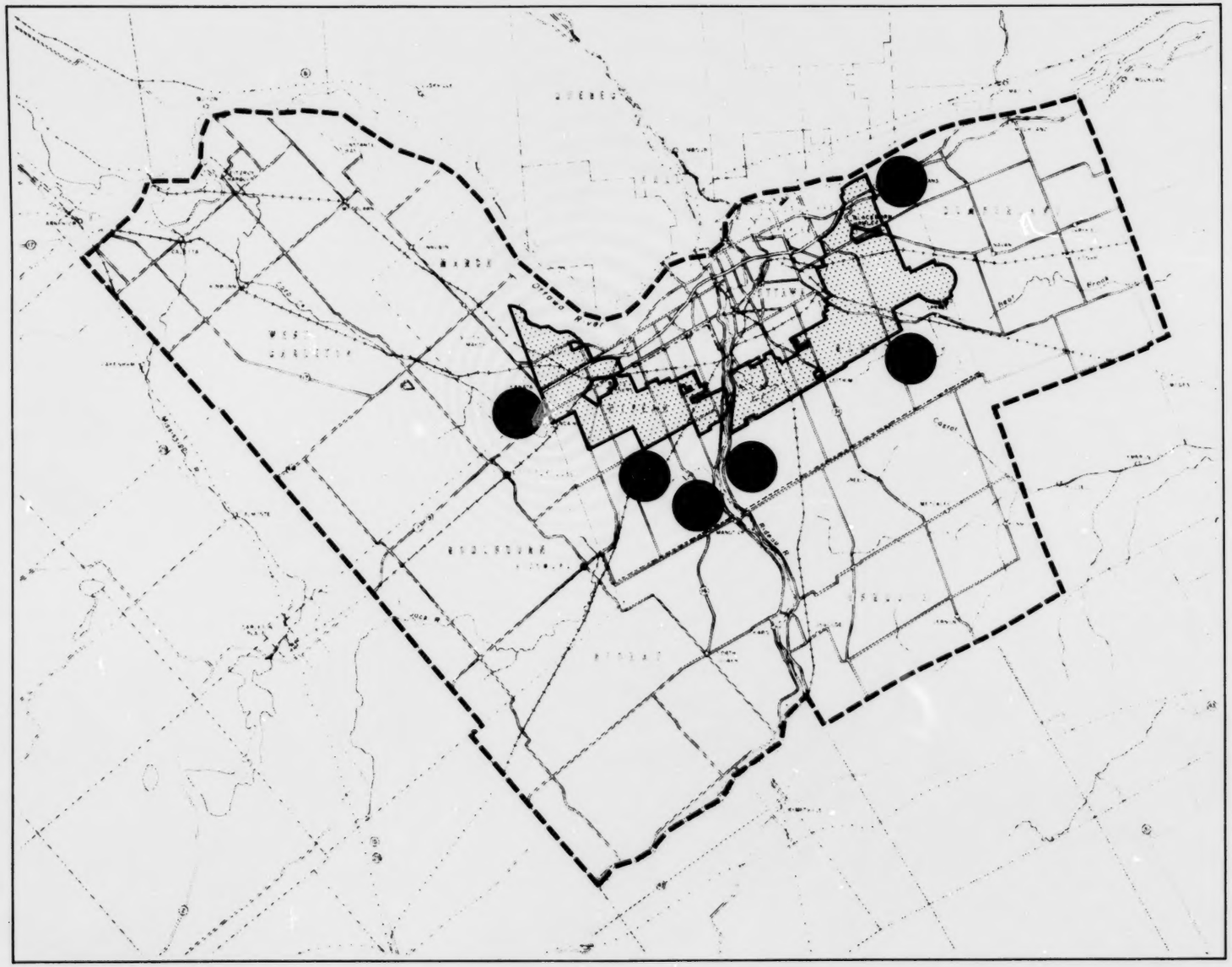
OUTAOUAIS REGIONAL COMMUNITY — COMMUNAUTÉ RÉGIONALE DE L'OUTAOUAIS

EASTERN ONTARIO DEVELOPMENT REGION — RÉGION DE DÉVELOPPEMENT DE L'EST DE L'ONTARIO

1974

Miles 10 5 0 10 20 30 Milles

MAP 1 CARTE



GROWTH AREAS STUDIED

ZONES DE CROISSANCE ÉTUDIÉES

GROWTH AREAS STUDIED — ZONES DE CROISSANCE ÉTUDIÉES

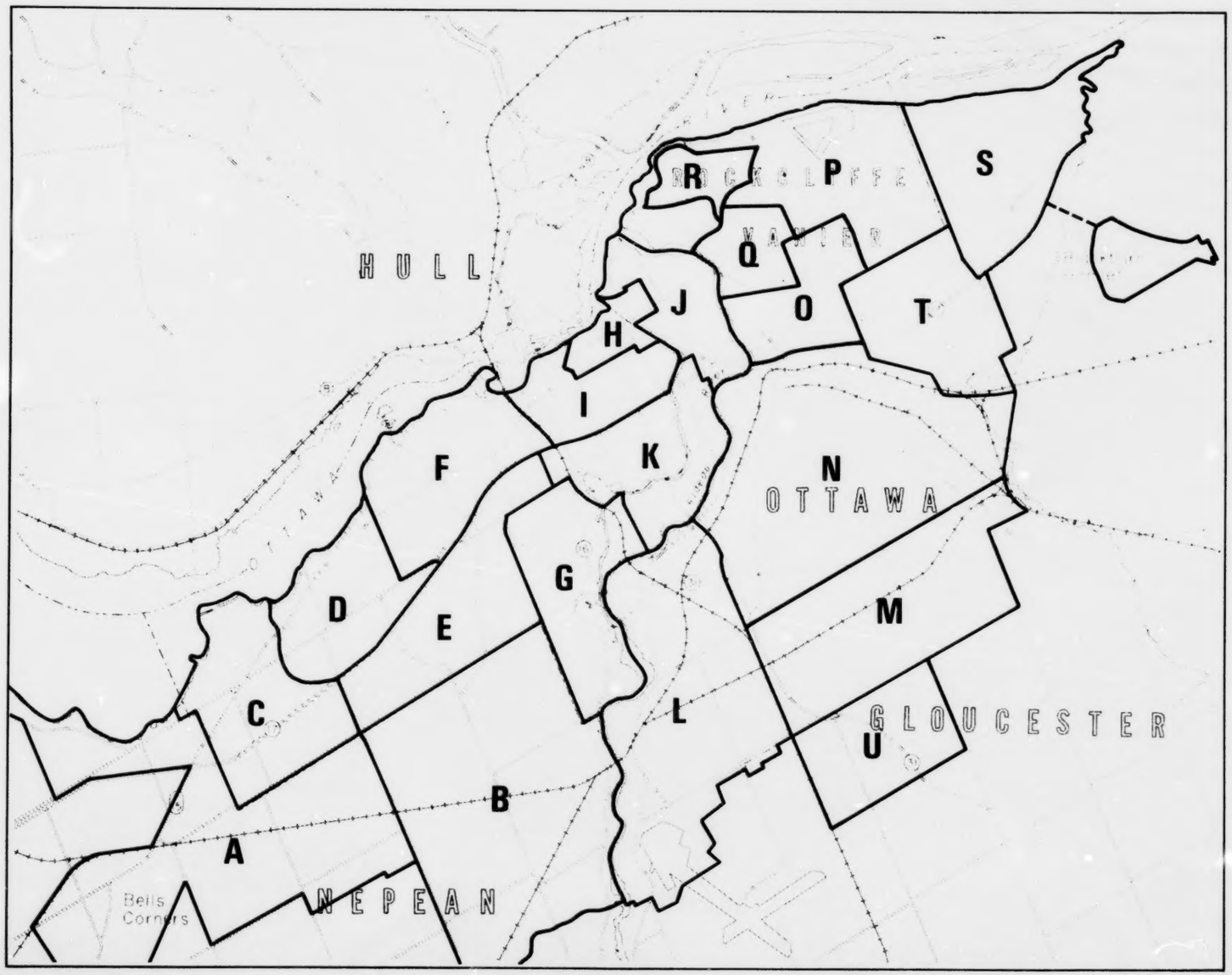
GREENBELT — CEINTURE DE VERDURE

1974

scale 1 : 400,000 échelle

4 miles 0 4 miles

MAP 2 CARTE



RESIDENTIAL AREAS

ZONES RÉSIDENTIELLES

RESIDENTIAL AREAS A ZONES RÉSIDENTIELLES

1974

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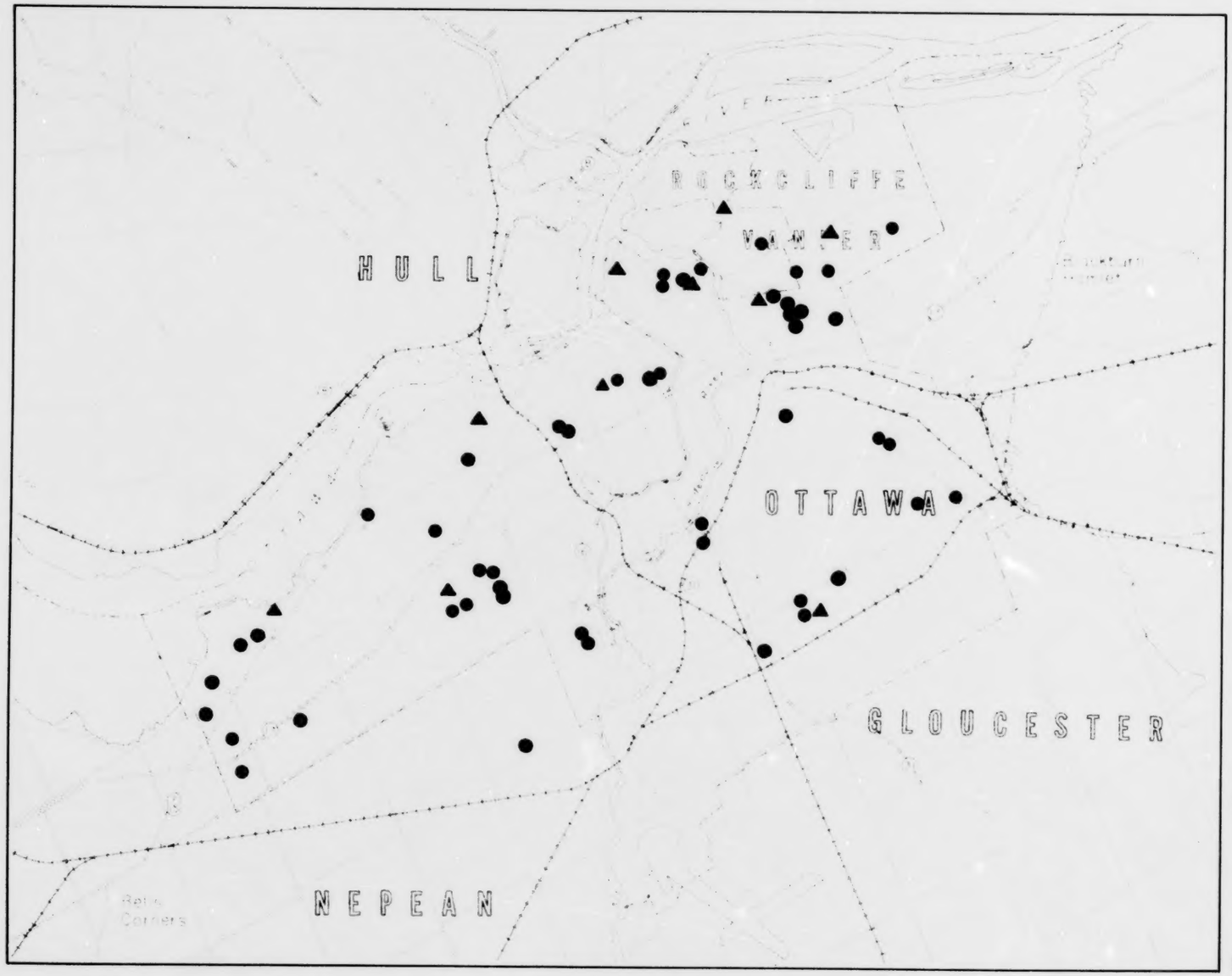
MAP 3 CARTE



PUBLIC HOUSING

LOGEMENTS PUBLICS

RENT-TO-INCOME HOUSING		LOGEMENTS À LOYER INDEXÉS SUR LE REVENU
Existing	●	Actuels
Approved or under construction	▲	Approuvés ou en cours de construction
LIMITED DIVIDEND HOUSING	●	LOGEMENTS À DIVIDENDES LIMITÉS

1974

scale 1:100,000 échelle

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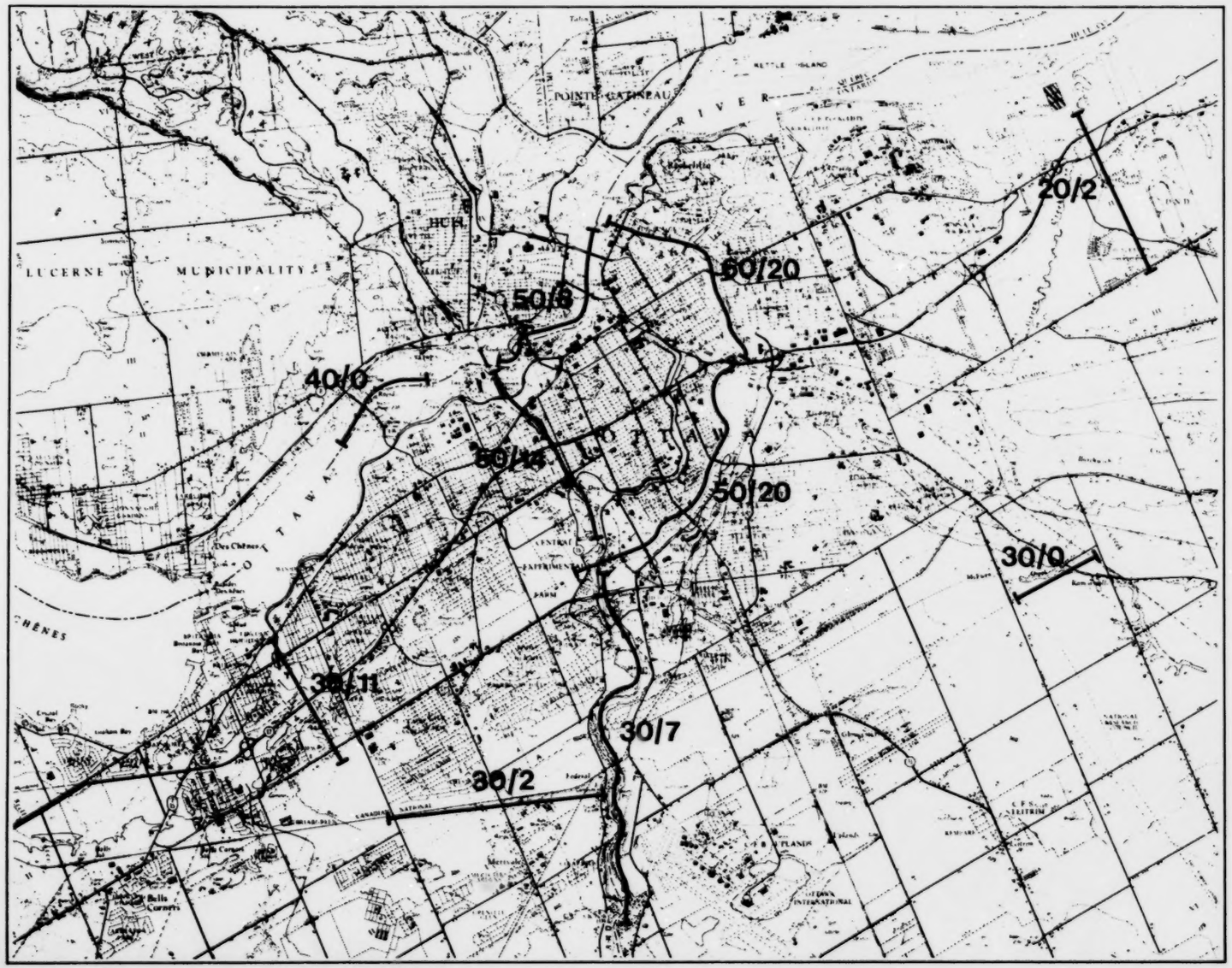
miles milles

MAP 4 CARTE



FUTURE GUIDELINES FOR TRANSIT USAGE [%] COMPARED TO 1971 TRANSIT LEVELS [%]
P.M. PEAK HOUR

DIRECTIVES FIXÉES POUR L'UTILISATION DES TRANSPORTS PUBLICS [%] PAR RAPPORT AUX NIVEAUX DE 1971 [%]
(HEURES DE POINTE DE L'APRÈS-MIDI)

SCREENLINE — AXE DE CONTRÔLE

% FUTURE GUIDELINES / % DIRECTIVES FIXEES — 30/2 — % 1971 USAGE / % NIVEAUX DE 1971

PERCENT TRANSIT USAGE = TOTAL TRANSIT PERSON TRIPS x 100 / TOTAL TRANSIT + AUTO PERSON TRIPS

POURCENTAGE D'UTILISATION DES TRANSPORTS PUBLICS = TOTAL DÉPLACEMENTS INDIV. TR. PUBLICS x 100 / TOTAL DÉPLACEMENTS INDIV. TR. PUBLICS ET AUTOMOBILES

scale 1:100,000 échelle

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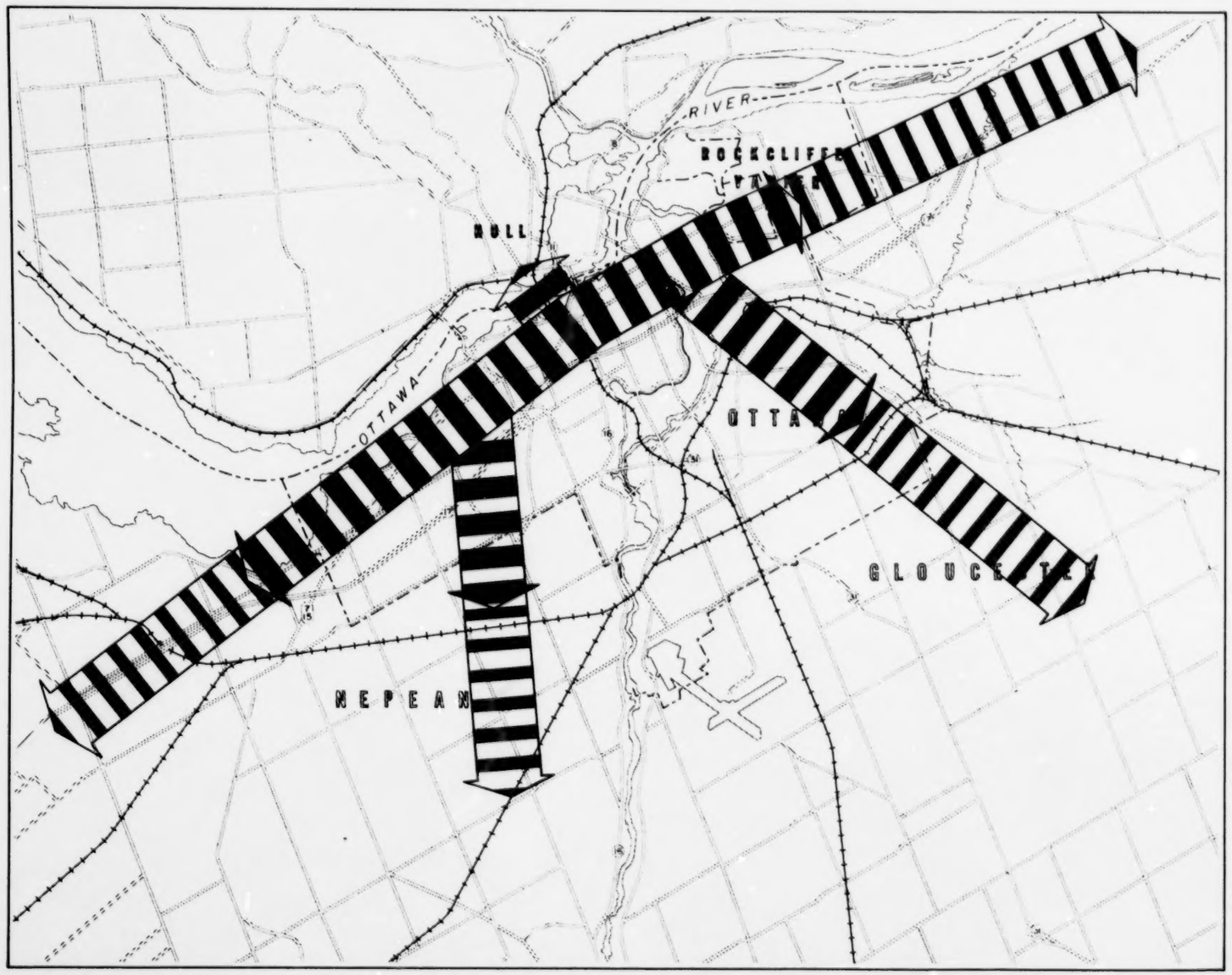
miles milles

MAP
5
CARTE



PROPOSED RAPID TRANSIT CORRIDORS

COULOIRS PROPOSÉS POUR LES TRANSPORTS URBAINS RAPIDES

MINIMUM MINIMUM

EXPANDED EXPANSION

1974

DELETED by OPA no.7
6 October, 1980

scale 1:125,000 échelle

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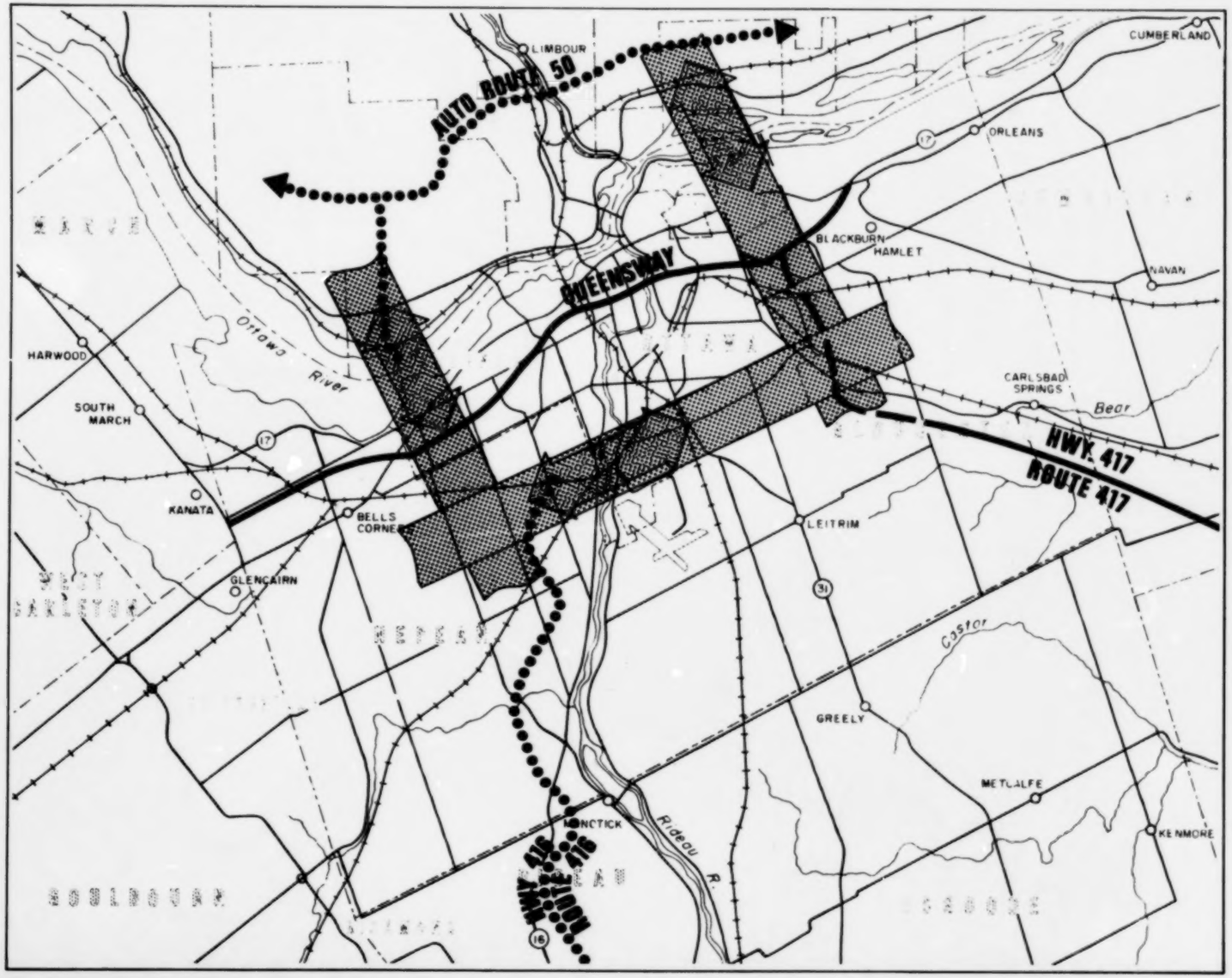
miles milles

MAP
6
CARTE



THE BOX SYSTEM

LE SYSTÈME PÉRIPHÉRIQUE

ROADWAYS: EXISTING / COMMITTED / PROPOSED — ROUTES: ACTUELLES / EN COURS / PROPOSÉES

CAPACITY DEFICIENCIES — CAPACITÉ INSUFFISANTE

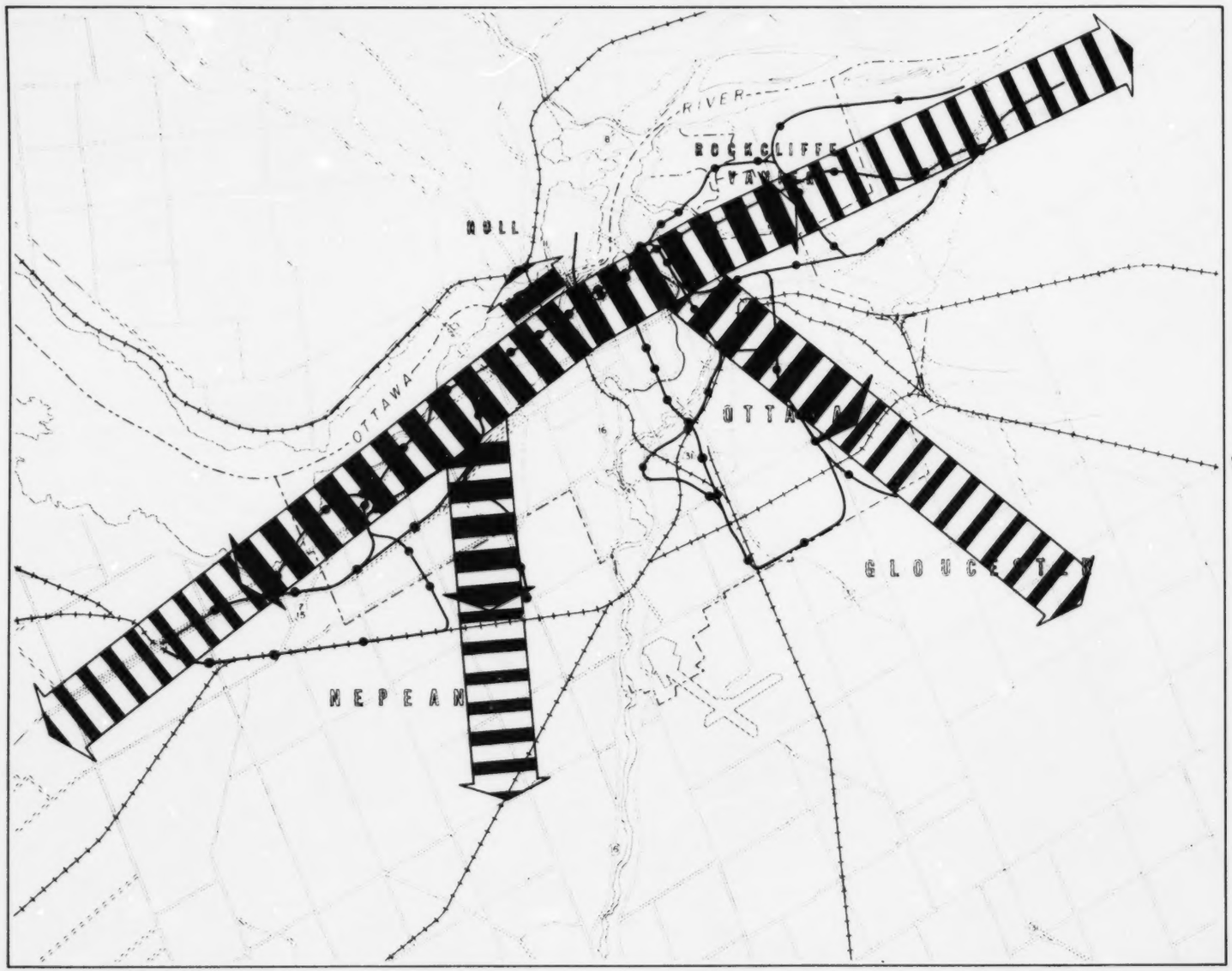
APPROXIMATE SYSTEM CORRIDOR — TRACÉ APPROXIMATIF DU SYSTÈME PÉRIPHÉRIQUE

1974

scale 1 : 200,000 échelle

2 0 2 4
miles milles

MAP 7 CARTE



POSSIBLE RAPID TRANSIT ROUTES

ITINÉRAIRES POSSIBLES DES TRANSPORTS URBAINS RAPIDES

POSSIBLE TRANSIT ROUTE
POSSIBLE STATION
ITINÉRAIRES POSSIBLES T.U.R.
STATION POSSIBLE

TRANSIT CORRIDOR MINIMUM
COULOIRS T.U.R. MINIMUM

TRANSIT CORRIDOR EXPANDED
COULOIRS T.U.R. EXPANSION

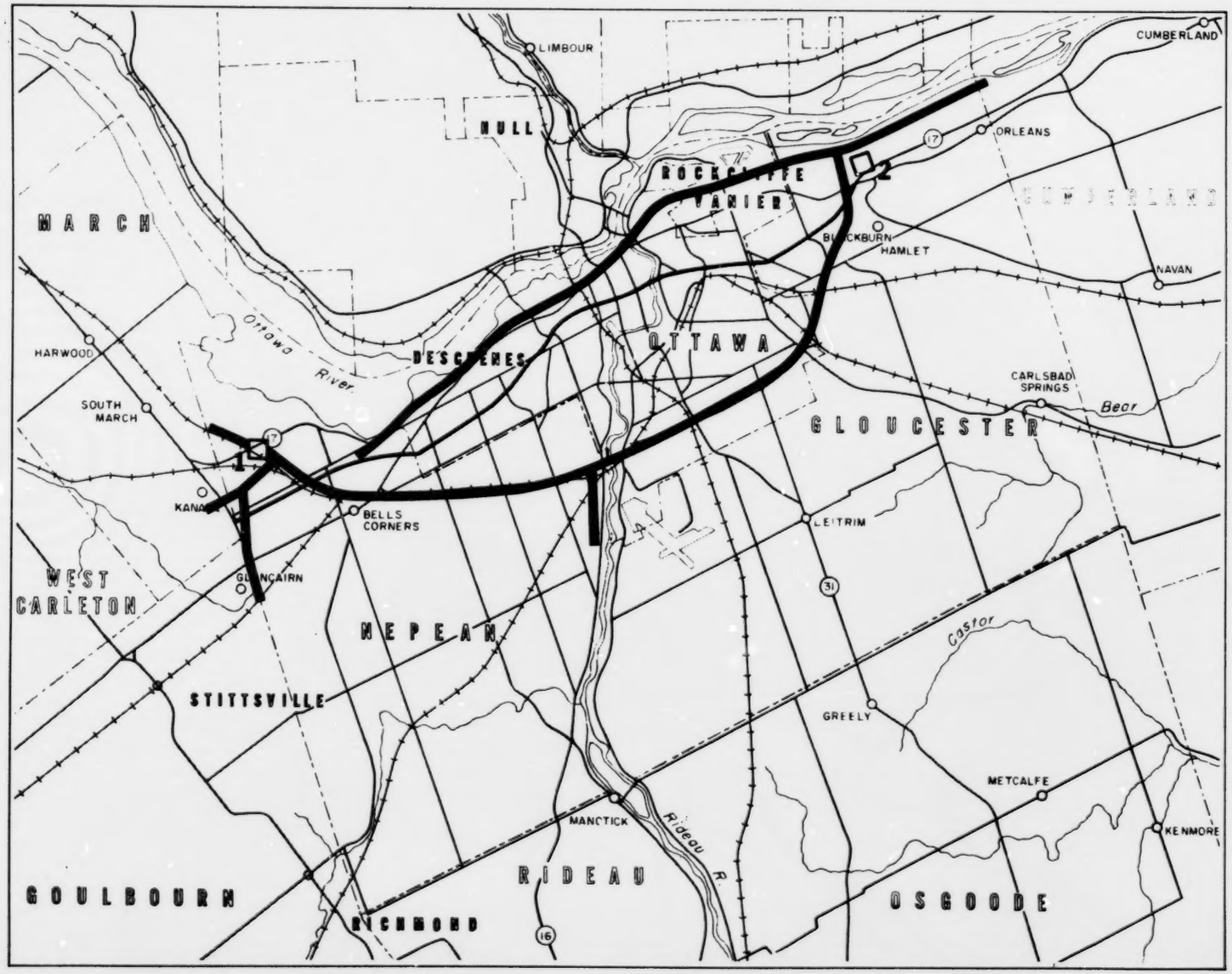
1974

DELETED by OPA no.7
6 October, 1980

scale 1:125,000 échelle

1 0 1 2 3
miles milles

MAP 8 CARTE



BASIC SEWER SYSTEM TO SERVE THE FIRST PRIORITY AREAS FOR URBAN DEVELOPMENT

SERVICE PRINCIPAL D'ÉGOUTS-ZONES PRIORITAIRES D'AMÉNAGEMENT URBAIN

WATTS CREEK POLLUTION CONTROL CENTRE — 1 CENTRE DE CONTRÔLE DE LA POLLUTION DE "WATTS CREEK"

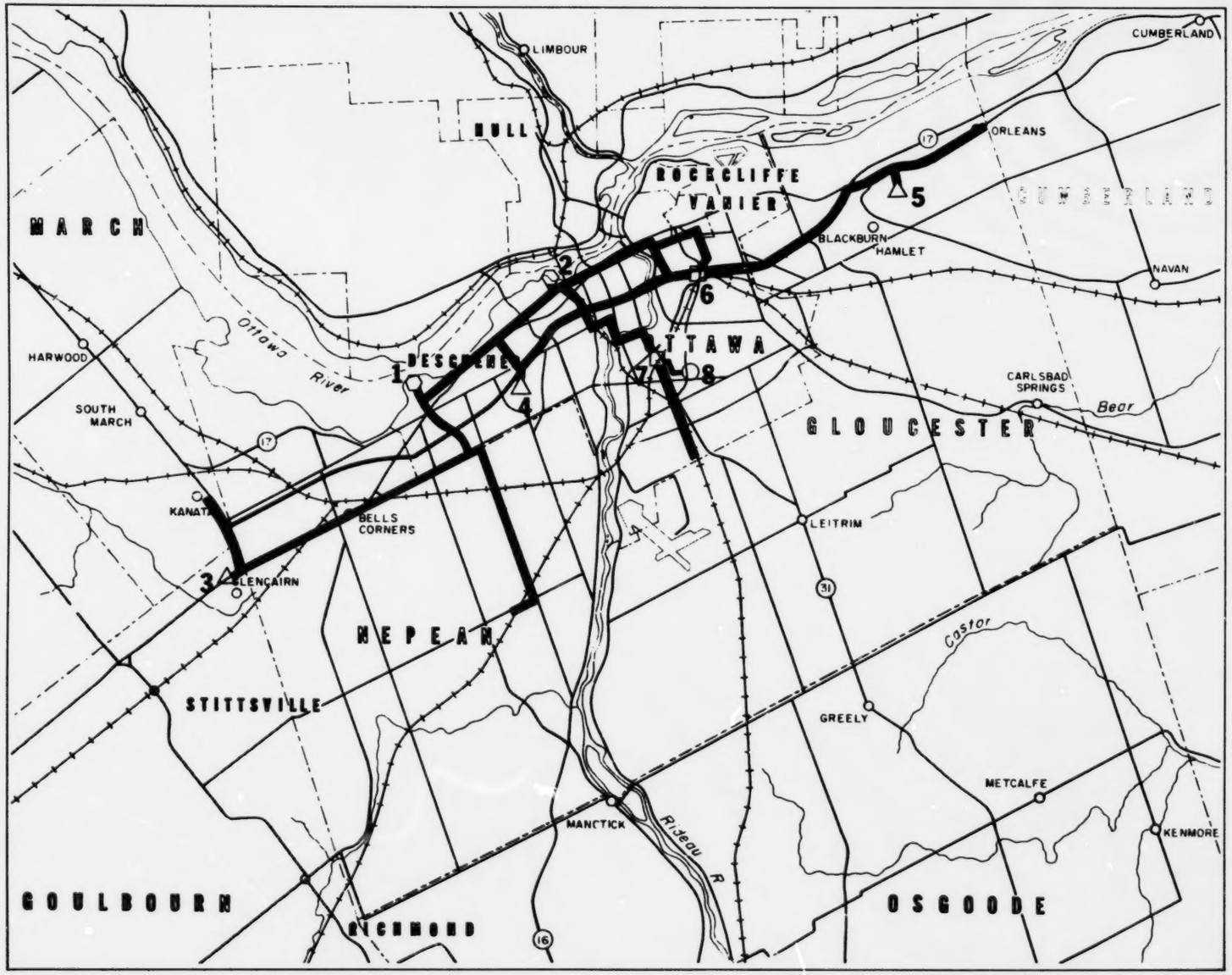
GREEN CREEK POLLUTION CONTROL CENTRE — 2 CENTRE DE CONTRÔLE DE LA POLLUTION DE "GREEN CREEK"

1974

scale 1 : 200,000 échelle

2 0 2 4
miles milles

MAP 9 CARTE



BASIC WATER SYSTEM TO SEE THE FIRST PRIORITY AREAS FOR URBAN DEVELOPMENT

SERVICE PRINCIPAL D'ADDUCTION D'EAU — ZONES PRIORITAIRES D'AMÉNAGEMENT URBAIN

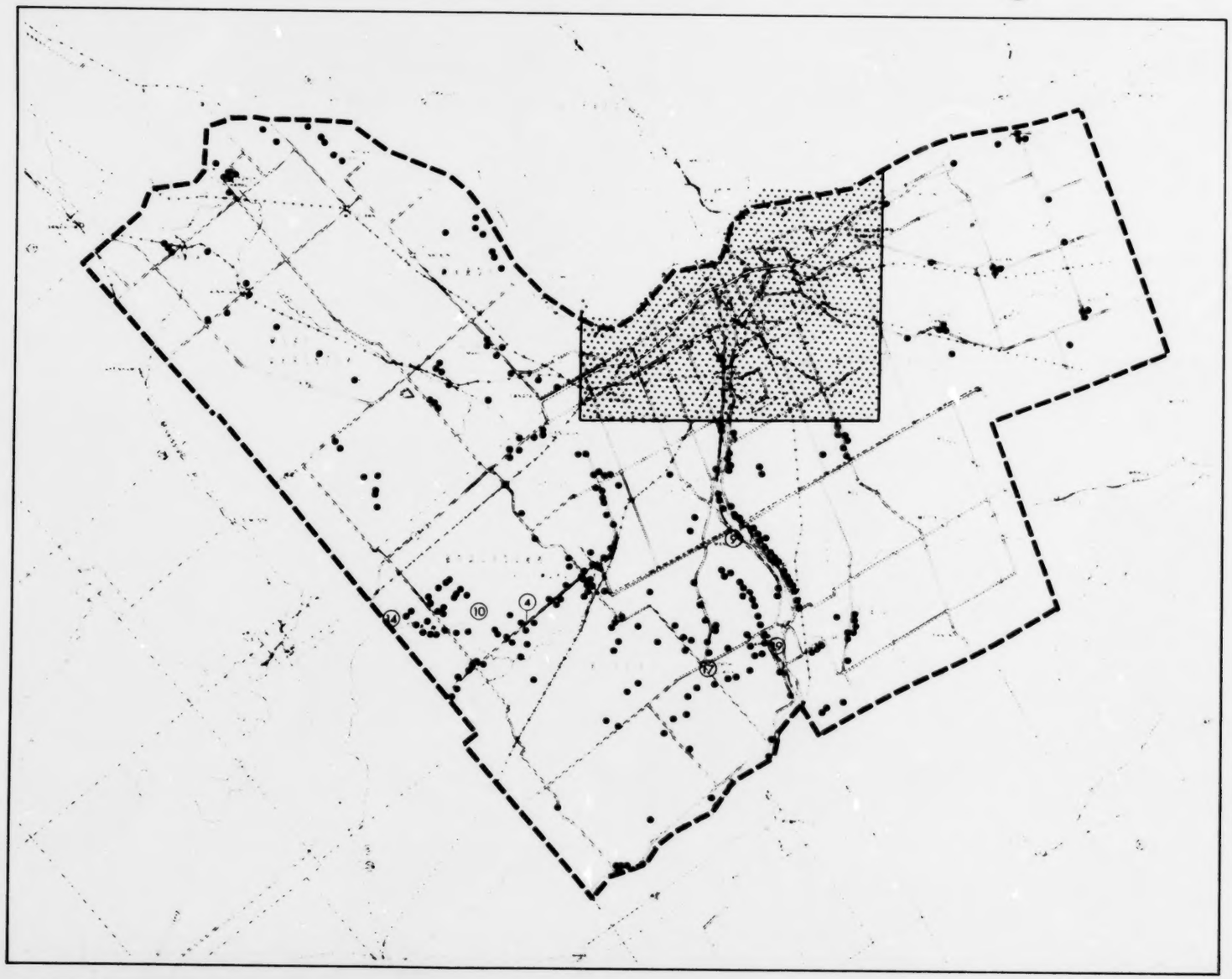
BRITANNIA WATER TREATMENT PLANT	1	USINE D'ÉPURATION DE BRITANNIA
LEMIEUX ISLAND WATER TREATMENT PLANT	2	USINE D'ÉPURATION DE L'ÎLE LEMIEUX
GLEN CAIRN RESERVOIR	3	RÉSERVOIR DE GLEN CAIRN
CARLINGTON HEIGHTS RESERVOIR	4	RÉSERVOIR DE CARLINGTON HEIGHTS
ORLEANS RESERVOIR	5	RÉSERVOIR D'ORLÉANS
HURDMAN BRIDGE PUMPING STATION	6	STATION DE POMPAGE DU PONT HURDMAN
BILLINGS BRIDGE PUMPING STATION	7	STATION DE POMPAGE DU PONT BILLINGS
ALTA VISTA ELEVATED TANK	8	CHÂTEAU D'EAU D'ALTA VISTA

1974

scale 1 : 200,000 échelle

2 0 2 4
miles miles

MAP 10 CARTE



HISTORIC BUILDINGS AND SITES
(RURAL AREAS)

MONUMENTS ET SITES HISTORIQUES
(ZONES RURALES)

AREA SHOWN ON MAP 12 & 13 — ZONE INDIQUÉE SUR LES CARTES 12 & 13

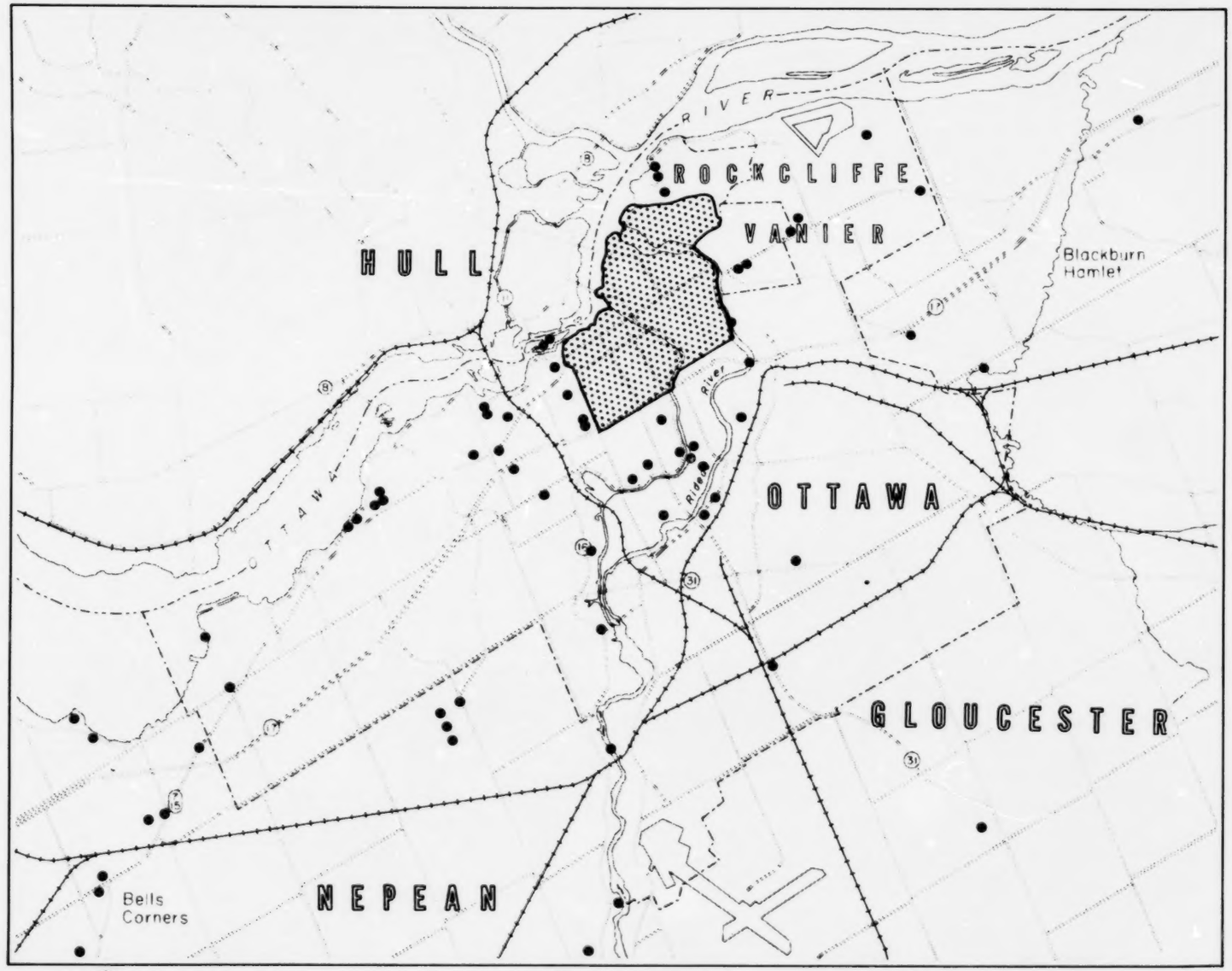
TOTAL NUMBER OF HISTORIC BUILDINGS IN THIS LOCATION — ⑮ — NOMBRE TOTAL DE MONUMENTS HISTORIQUES À CET ENDROIT

Prepared from information available in 1973
Selon des informations de 1973

scale 1 : 400,000 échelle

4 miles 0 4 8 miles

MAP 11 CARTE



HISTORIC BUILDINGS AND SITES
(OTTAWA AND VICINITY)

MONUMENTS ET SITES HISTORIQUES
(OTTAWA ET ENVIRONS)

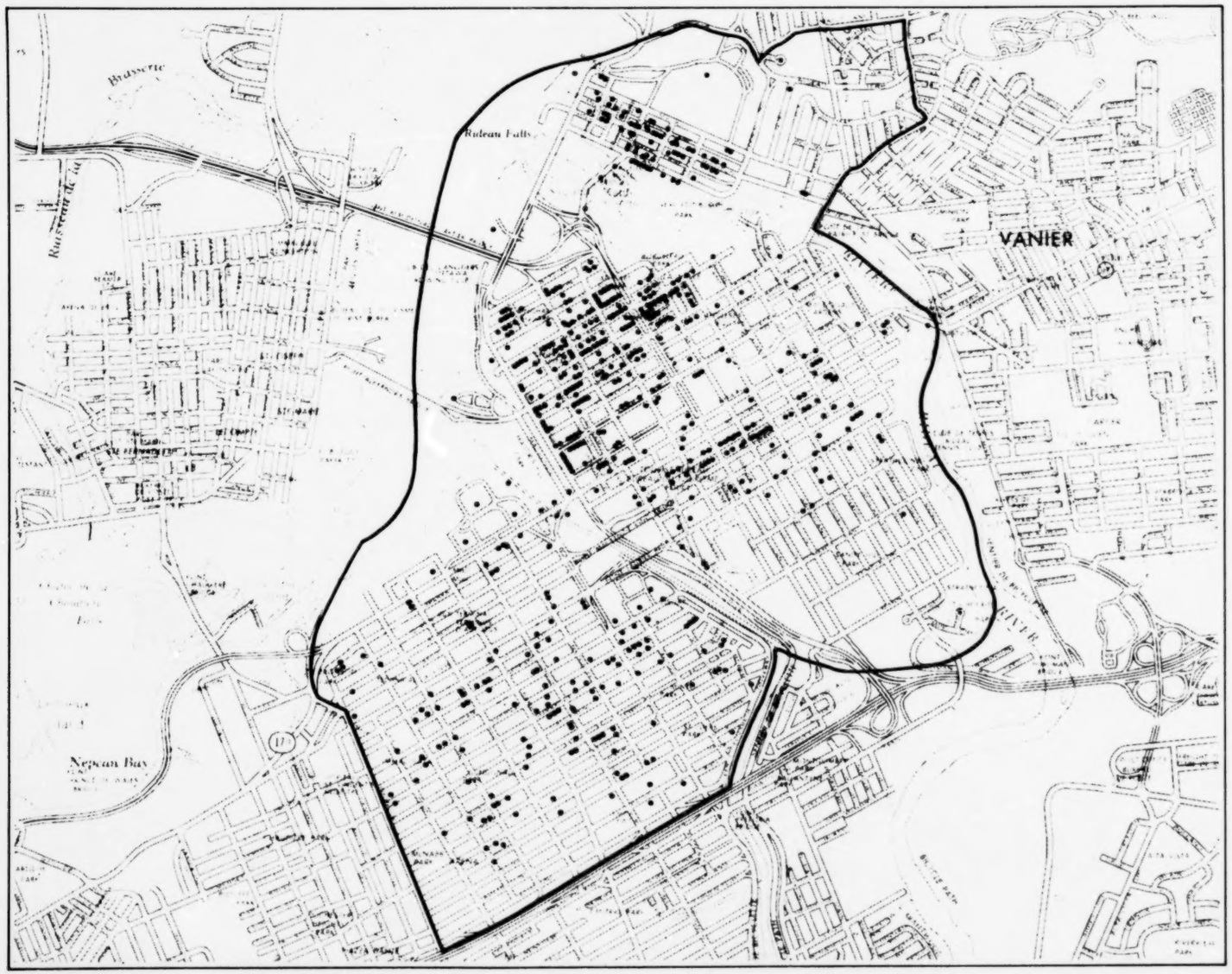
AREA SHOWN ON MAP 13 ZONE INDIQUÉE SUR LA CARTE 13

Prepared from information available in 1973
Selon des informations de 1973

scale 1:100,000 échelle

1 0 1 2
miles miles

MAP 12 CARTE



HISTORIC BUILDINGS AND SITES
(DOWNTOWN AND VICINITY)

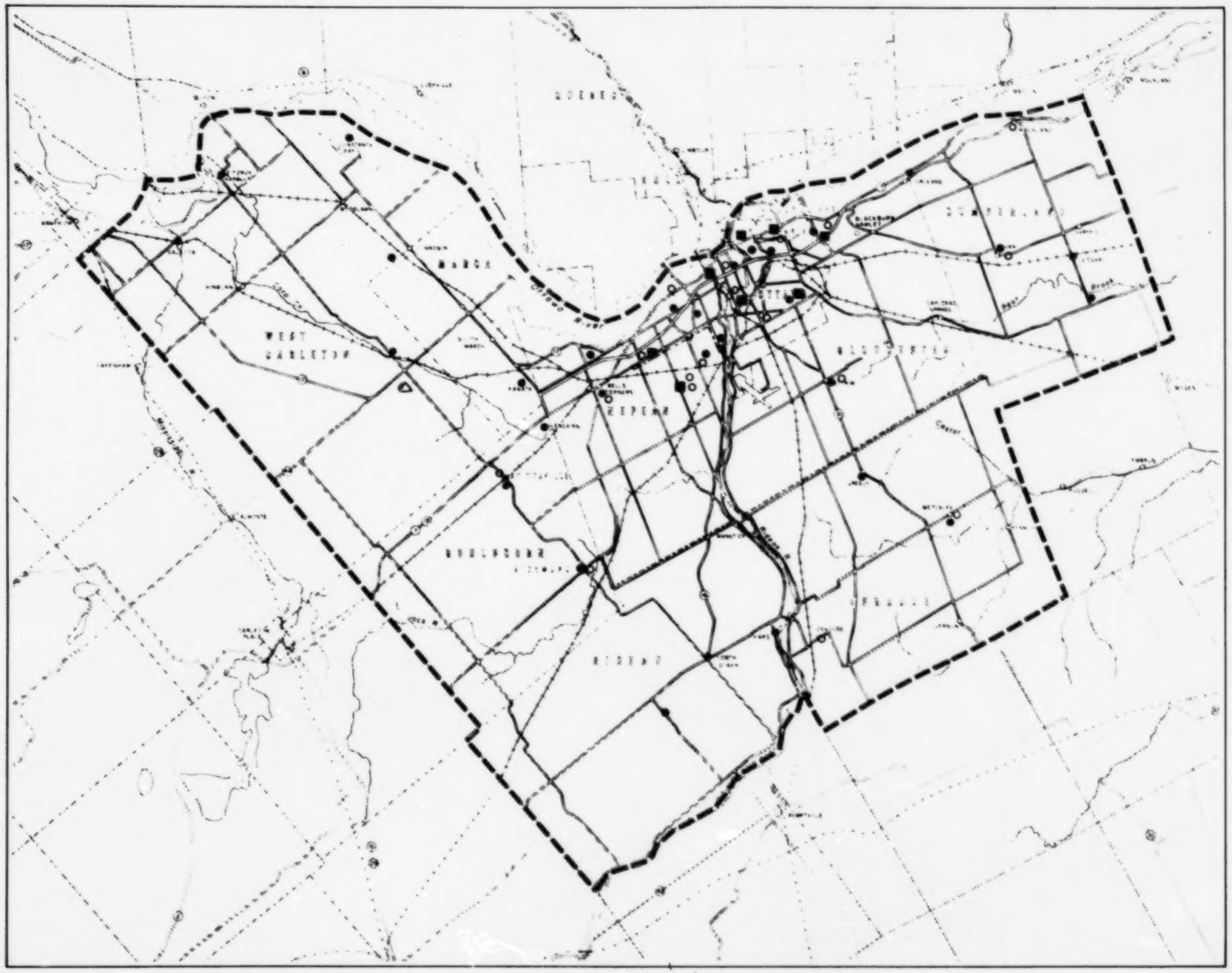
MONUMENTS ET SITES HISTORIQUES
(CENTRE VILLE ET ENVIRONS)

Prepared from information available in 1973
Selon des informations de 1973

scale 1 : 25,000 échelle

1/4 0 1/4 1/2
miles miles

MAP
13
CARTE



COMMUNITY CENTRES AND OTHER RECREATIONAL FACILITIES

CENTRES COMMUNAUTAIRES ET AUTRES ÉQUIPEMENTS DE LOISIRS

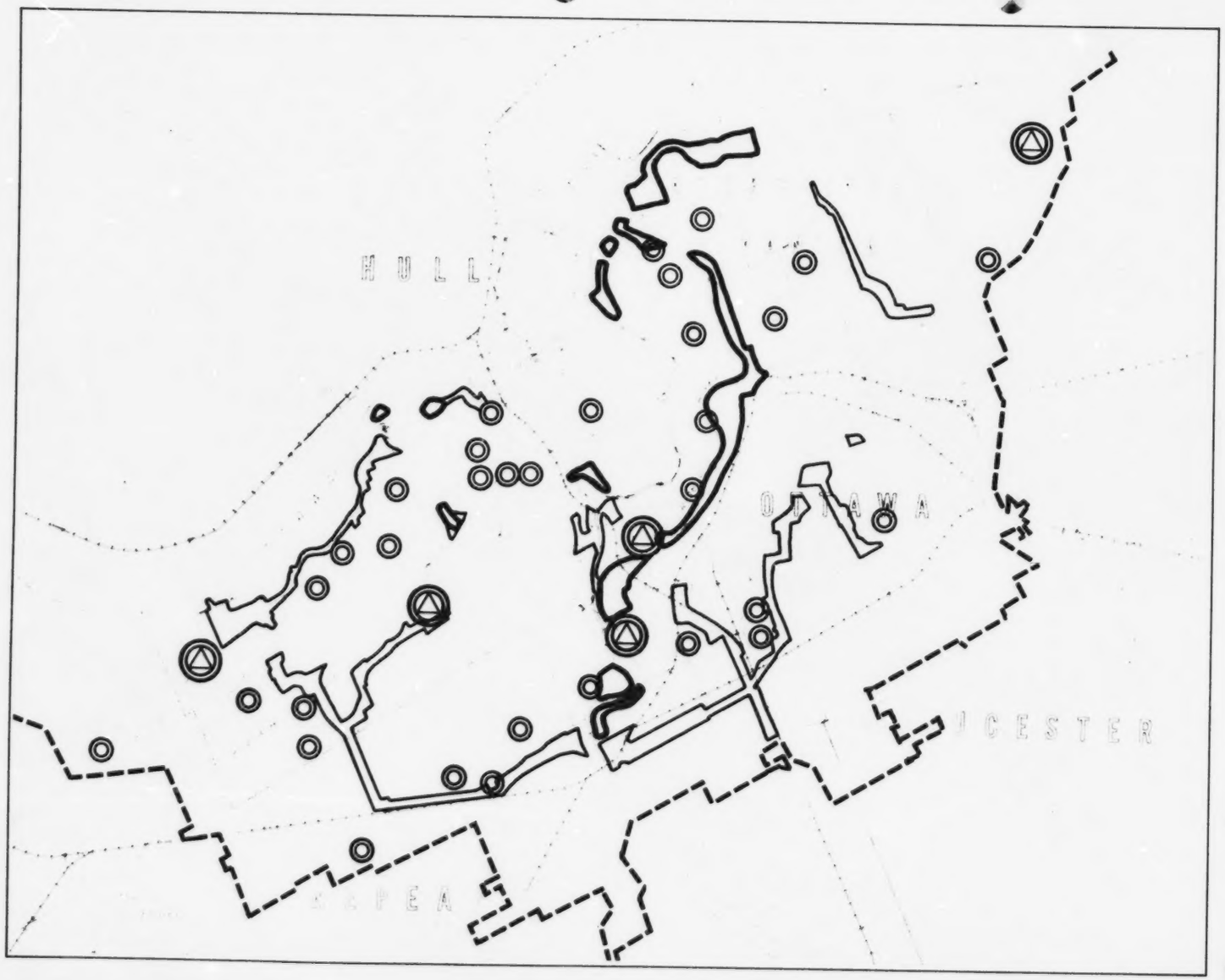
INDOOR SWIMMING POOL	■	PISCINE COUVERTE
ARENA	○	ARÉNA
COMMUNITY CENTRE BUILDING AND PUBLIC MEETING ROOMS	●	CENTRE COMMUNAUTAIRE OU SALLES DE RÉUNION PUBLIQUES

1974

scale 1 : 400,000 échelle

4 0 4 8
miles milles

MAP
14
CARTE



MAJOR PARK SPACE
(WITHIN INNER LIMIT OF GREENBELT)

EMPLACEMENTS DES PRINCIPAUX PARCS.
(A L'INTÉRIEUR DE LA LIMITE INTERNE DE LA CEINTURE DE VERDURE).

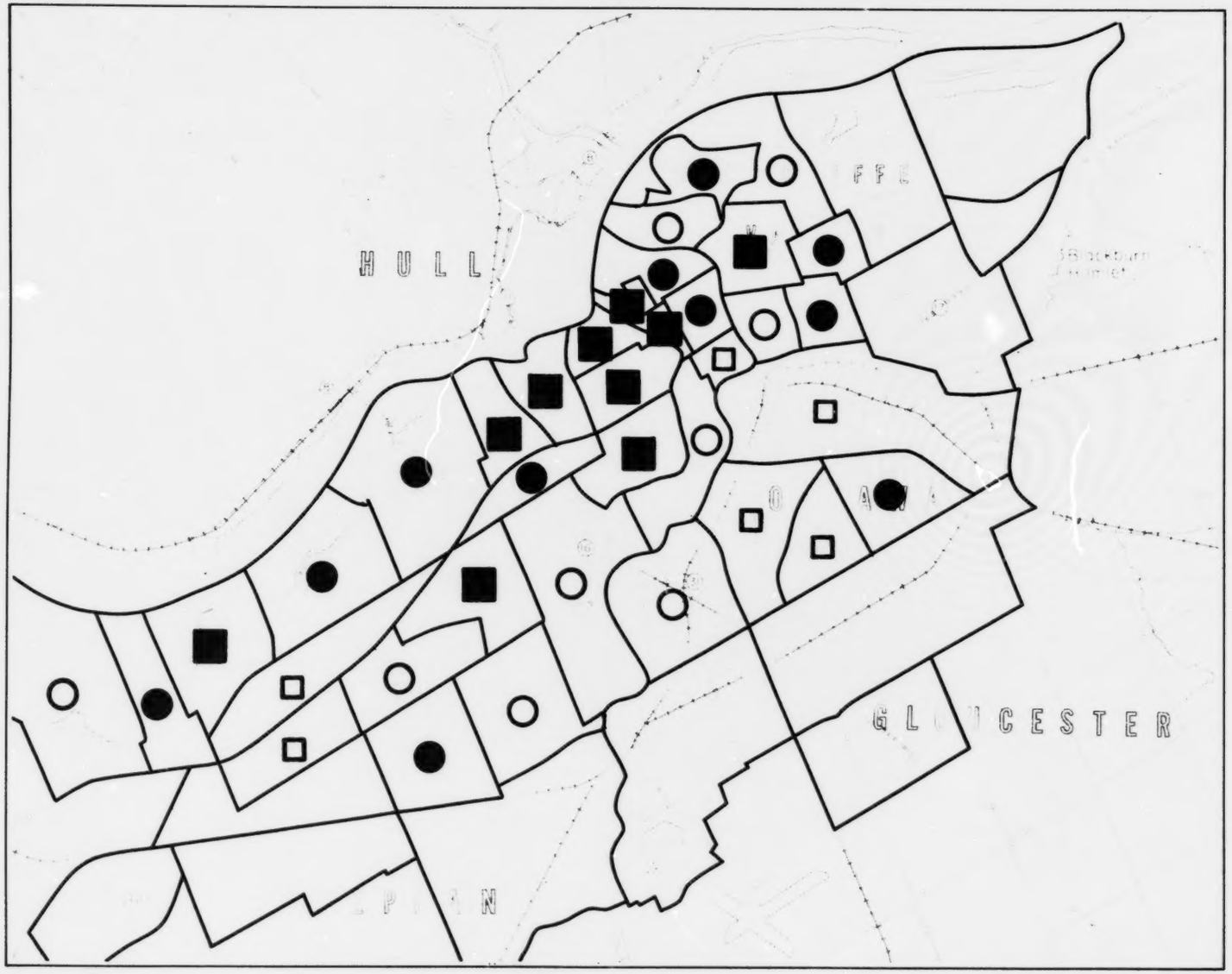
"COMMUNITY" AND "DISTRICT" PARKS	PARCS "COMMUNAUTAIRES" ET "DE DISTRICT"
LARGE URBAN PARKS	GRANDS PARCS URBAINS
MAJOR AREAS OF PASSIVE PARKLAND	PRINCIPAUX PARCS NON AMÉNAGES
OPEN SPACE ASSOCIATED WITH EXISTING AND POSSIBLE FUTURE PARKWAYS	ESPACES LIBRES LE LONG DES PROMENADES EXISTANTES OU POSSIBLES
INNER LIMIT OF GREENBELT	LIMITE INTERNE DE LA CEINTURE DE VERDURE

1974

scale 1:100,000 échelle

1 0 1 2
miles milles

MAP 15 CARTE



AVAILABILITY OF LOCAL PARKS FOR ACTIVE RECREATION

(SHOWN ONLY FOR SECTORS ALMOST ENTIRELY BUILT UP)

PARCS LOCAUX DESTINÉS AUX LOISIRS ACTIFS

(UNIQUEMENT POUR LES SECTEURS PRESQUE COMPLÈREMENT AMÉNAGÉS)

ACRES/1,000 POPULATION — ACRES/1,000 HABITANTS

LESS THAN 1	MOINS DE 1
1 — 1.9	1 — 1.9
2 — 2.9	2 — 2.9
MORE THAN 3	PLUS DE 3

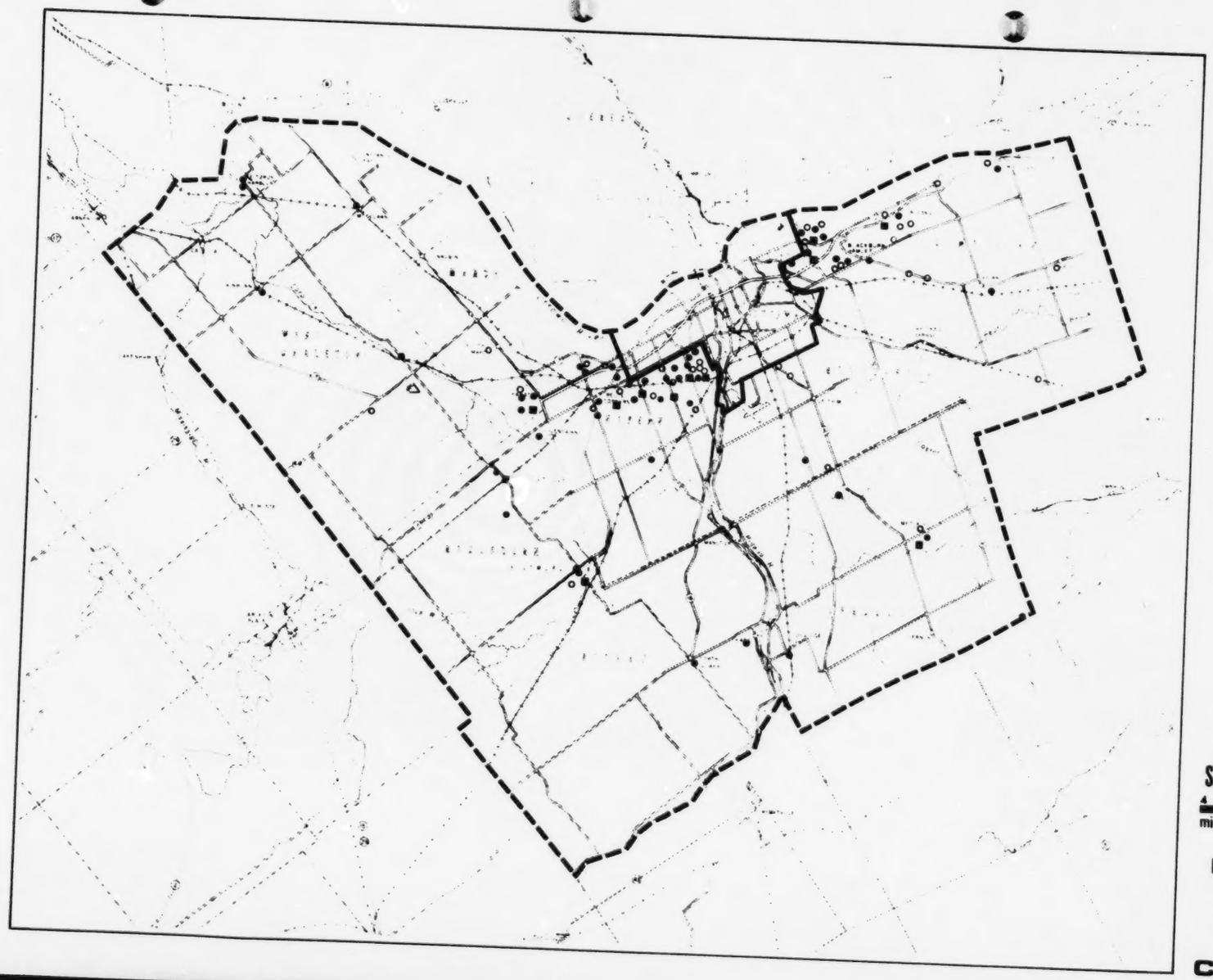
1972

scale 1:100,000 échelle

1 0 1 2

miles milles

MAP 16 CARTE



SCHOOLS
(CARLETON BOARDS)

ÉCOLES
(CONSEILS SCOLAIRES DE CARLETON)

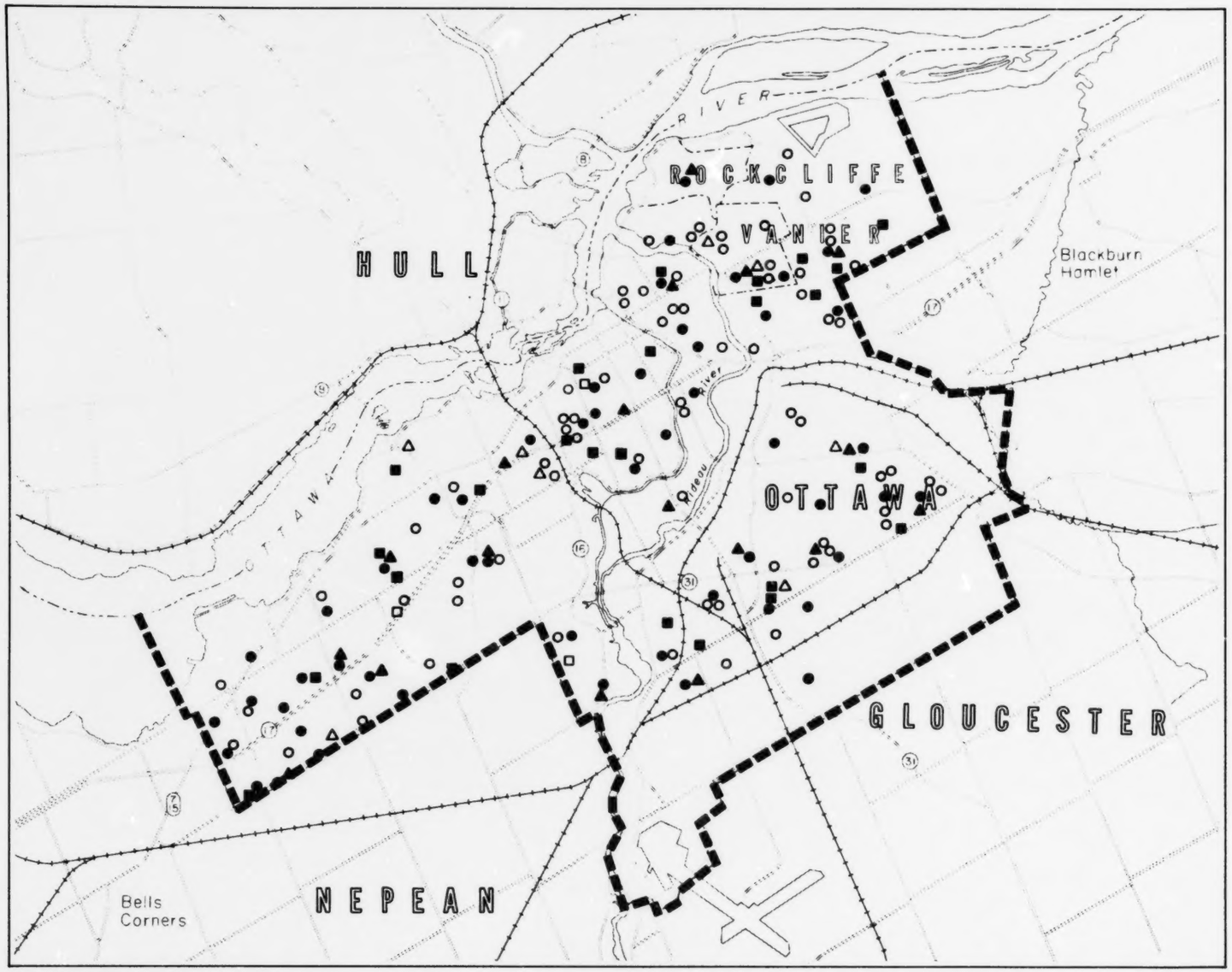
PUBLIC HIGH	SECONDAIRE PUBLIQUE
PUBLIC	PRIMAIRE PUBLIQUE
SEPARATE ELEMENTARY AND SENIOR ELEMENTARY	PRIMAIRE ET INTERMÉDIAIRE SÉPARÉES
BOUNDARY OF OTTAWA	LIMITE D'OTTAWA

1974

scale 1 : 400,000 échelle

4 0 4 8
miles milles

MAP
17
CARTE



SCHOOLS
(OTTAWA BOARDS)

ÉCOLES
(CONSEILS SCOLAIRES D'OTTAWA)

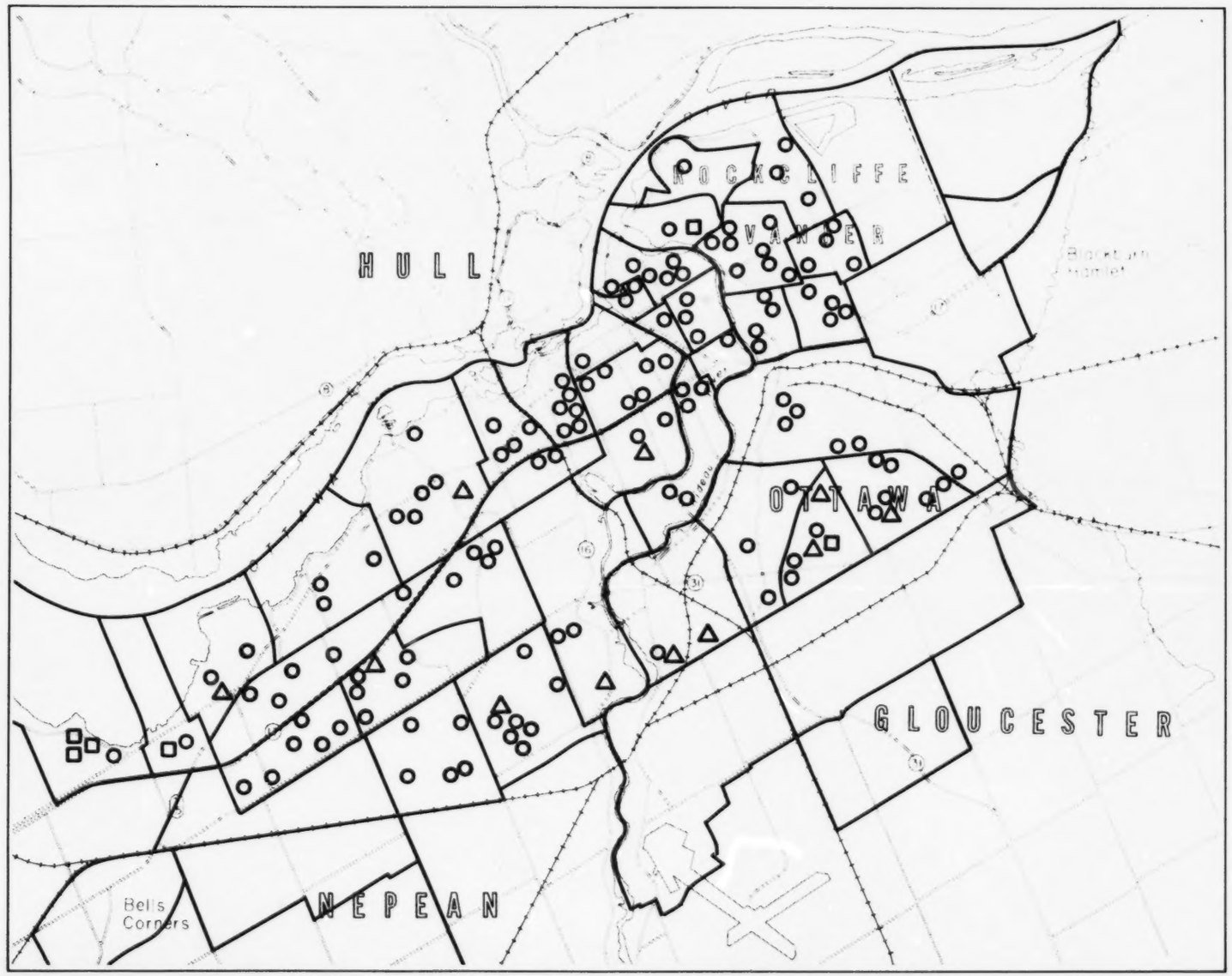
PUBLIC ELEMENTARY	PRIMAIRE PUBLIQUE
PUBLIC INTERMEDIATE	INTERMÉDIAIRE PUBLIQUE
PUBLIC SECONDARY	SECONDAIRE PUBLIQUE
SEPARATE ELEMENTARY	PRIMAIRE SÉPARÉE
SEPARATE INTERMEDIATE	INTERMÉDIAIRE SÉPARÉE
SEPARATE HIGH	SECONDAIRE SÉPARÉE
BOUNDARY OF OTTAWA	LIMITE D'OTTAWA

1974

scale 1:100,000 échelle

1 0 1 2
miles milles

MAP
18
CARTE



ACCOMMODATION AVAILABLE IN ELEMENTARY SCHOOLS

(SHOWN ONLY FOR SECTORS ALMOST ENTIRELY BUILT UP)

CAPACITÉ ACTUELLE DES ÉCOLES PRIMAIRES

(UNIQUEMENT POUR LES SECTEURS PRESQUE COMPLÈTEMENT AMÉNAGÉS)

SCHOOLS WHERE CAPACITY EXCEEDS ENROLLMENT	○	CAPACITÉ D'ACCUEIL SUPÉRIEURE AUX INSCRIPTIONS
SCHOOLS WHERE ENROLLMENT EXCEEDS CAPACITY	□	NOMBRE D'INSCRIPTIONS SUPÉRIEUR A LA CAPACITÉ D'ACCUEIL
SCHOOLS WHERE CAPACITY MATCHES ENROLLMENT	△	NOMBRE D'INSCRIPTIONS EGAL A LA CAPACITÉ D'ACCUEIL

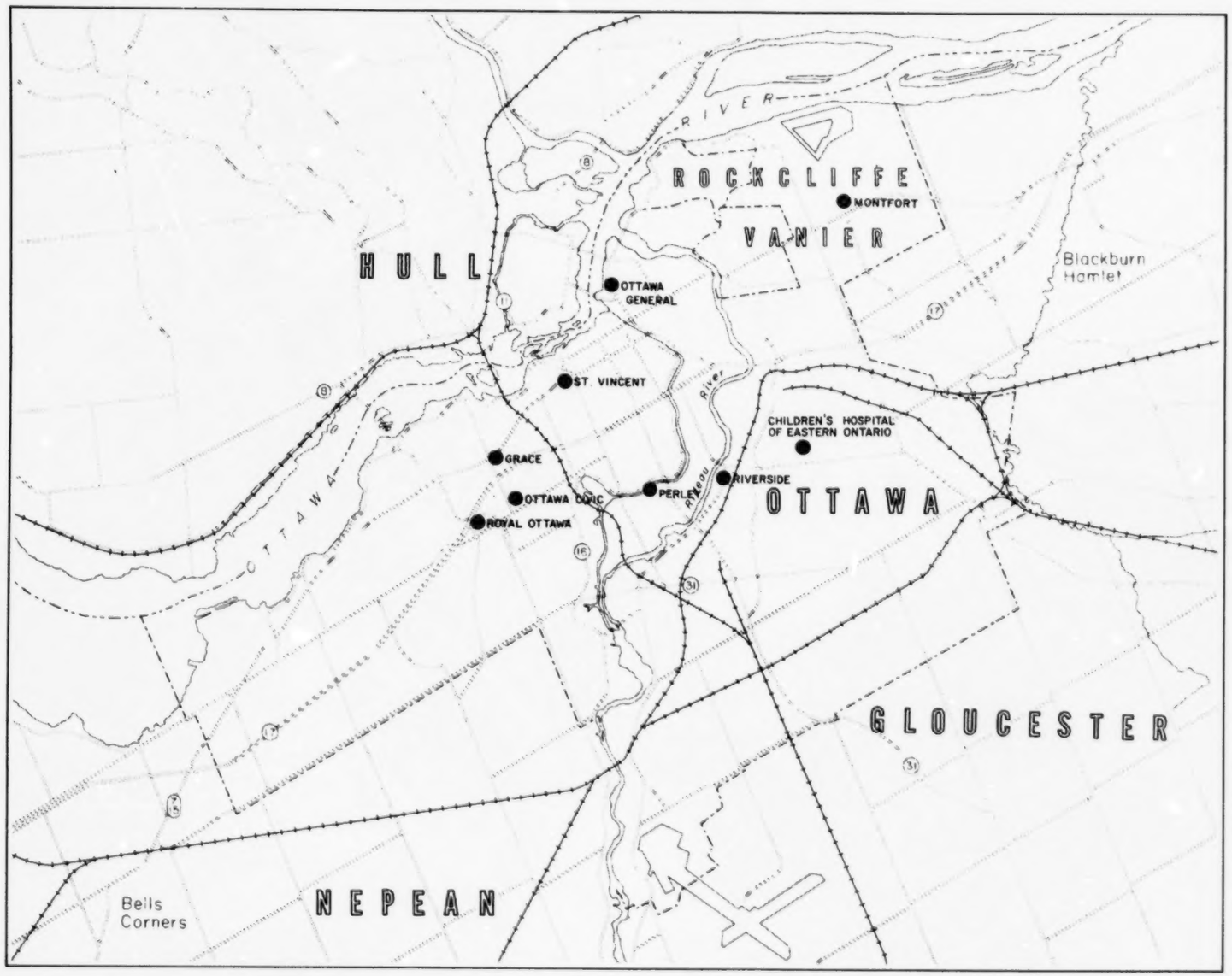
1972

scale 1:100,000 échelle

1 0 1 2

miles milles

MAP 19 CARTE



HOSPITALS

HÔPITAUX

HOSPITALS ● HÔPITAUX

1974

scale 1:100,000 échelle

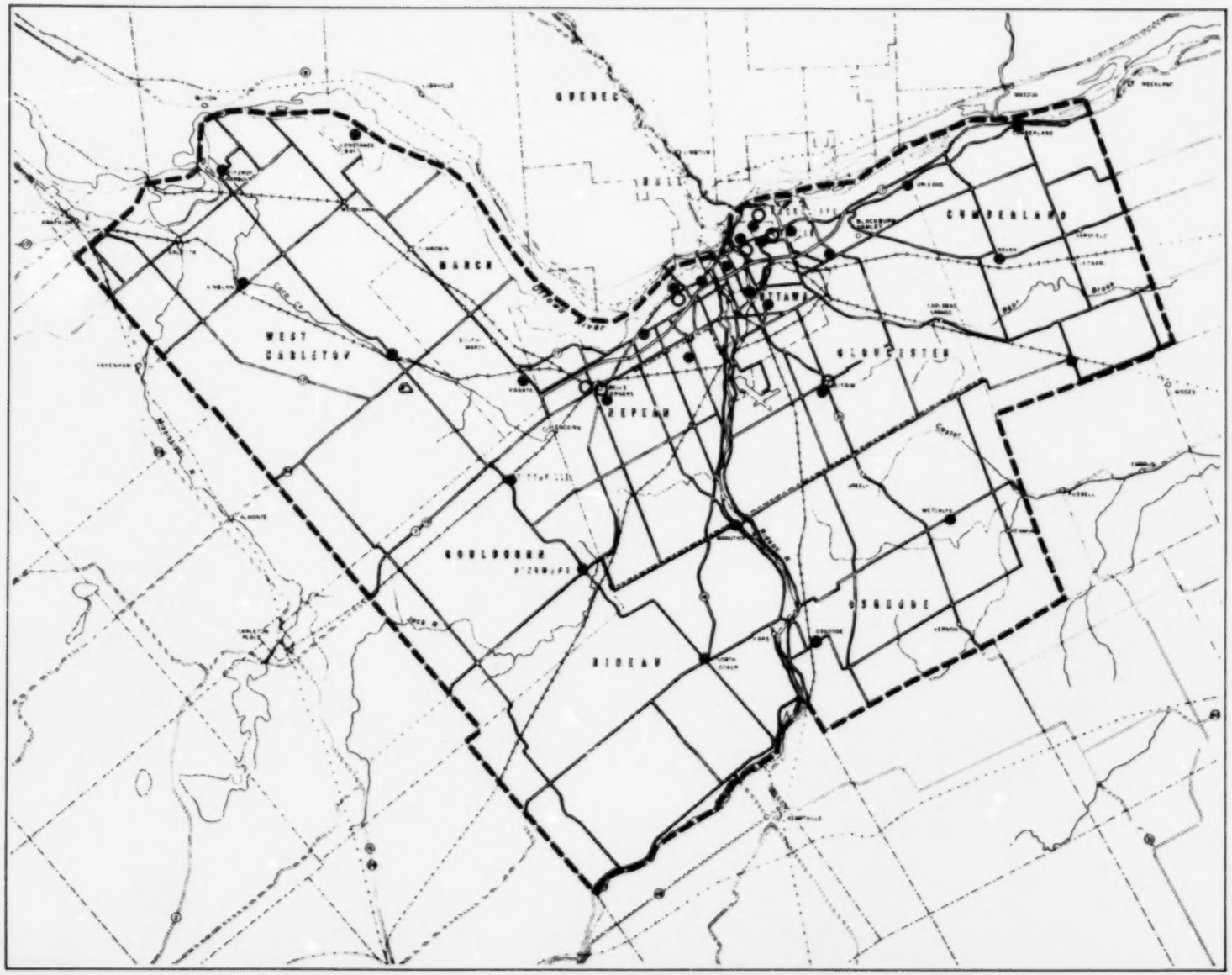
1 0 1 2

miles milles

MAP

20

CARTE



FIRE STATIONS AND POLICE STATIONS

POSTES DE POLICE ET CASERNES DE POMPIERS

FIRE STATIONS ● CASERNES DE POMPIERS

POLICE STATIONS ○ POSTES DE POLICE

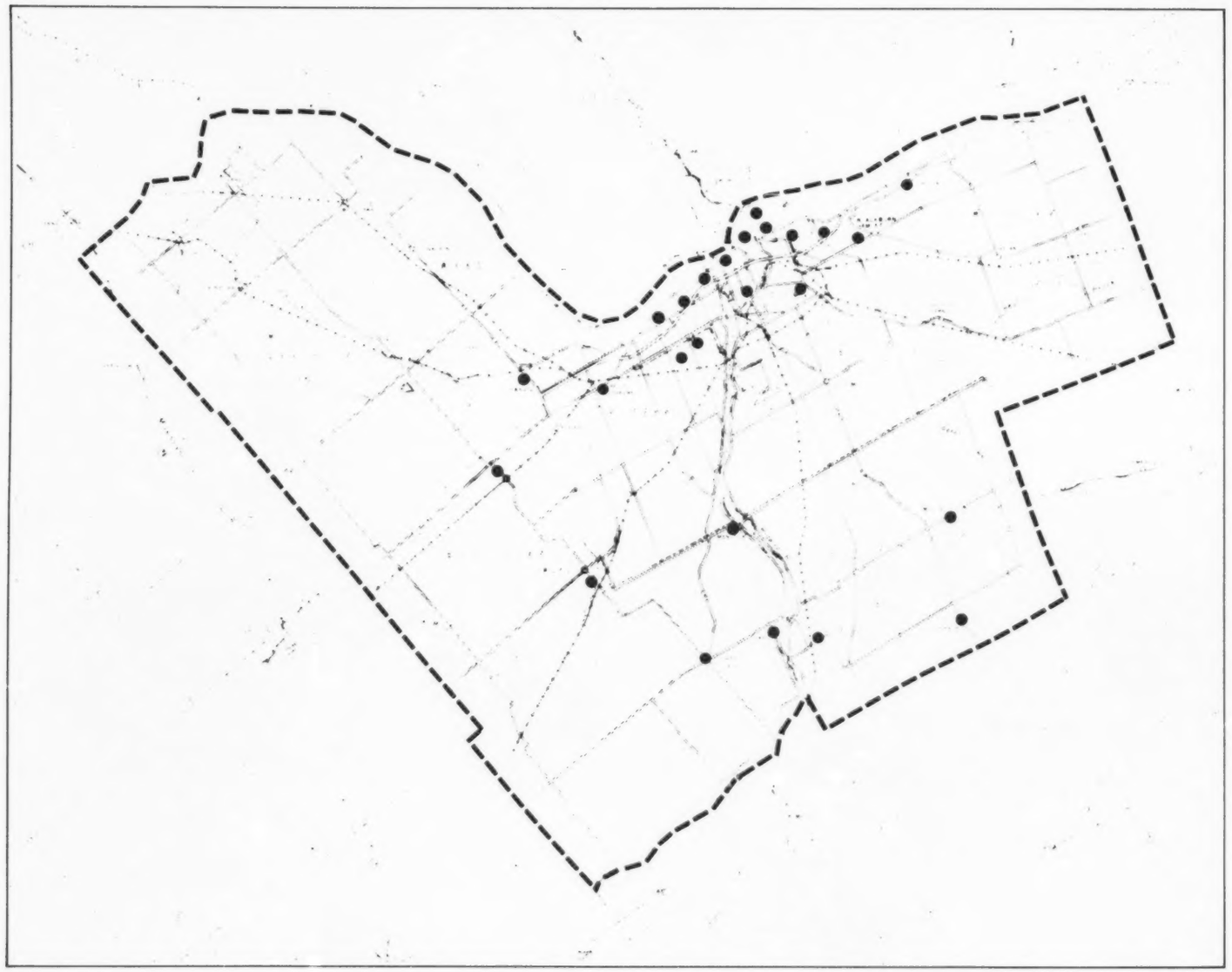
1974

scale 1 : 400,000 échelle

4 0 4 8

miles milles

MAP 21 CARTE



PUBLIC LIBRARIES

BIBLIOTHÈQUES PUBLIQUES

PUBLIC LIBRARIES ● BIBLIOTHÈQUES PUBLIQUES

1974

scale 1 : 400,000 échelle

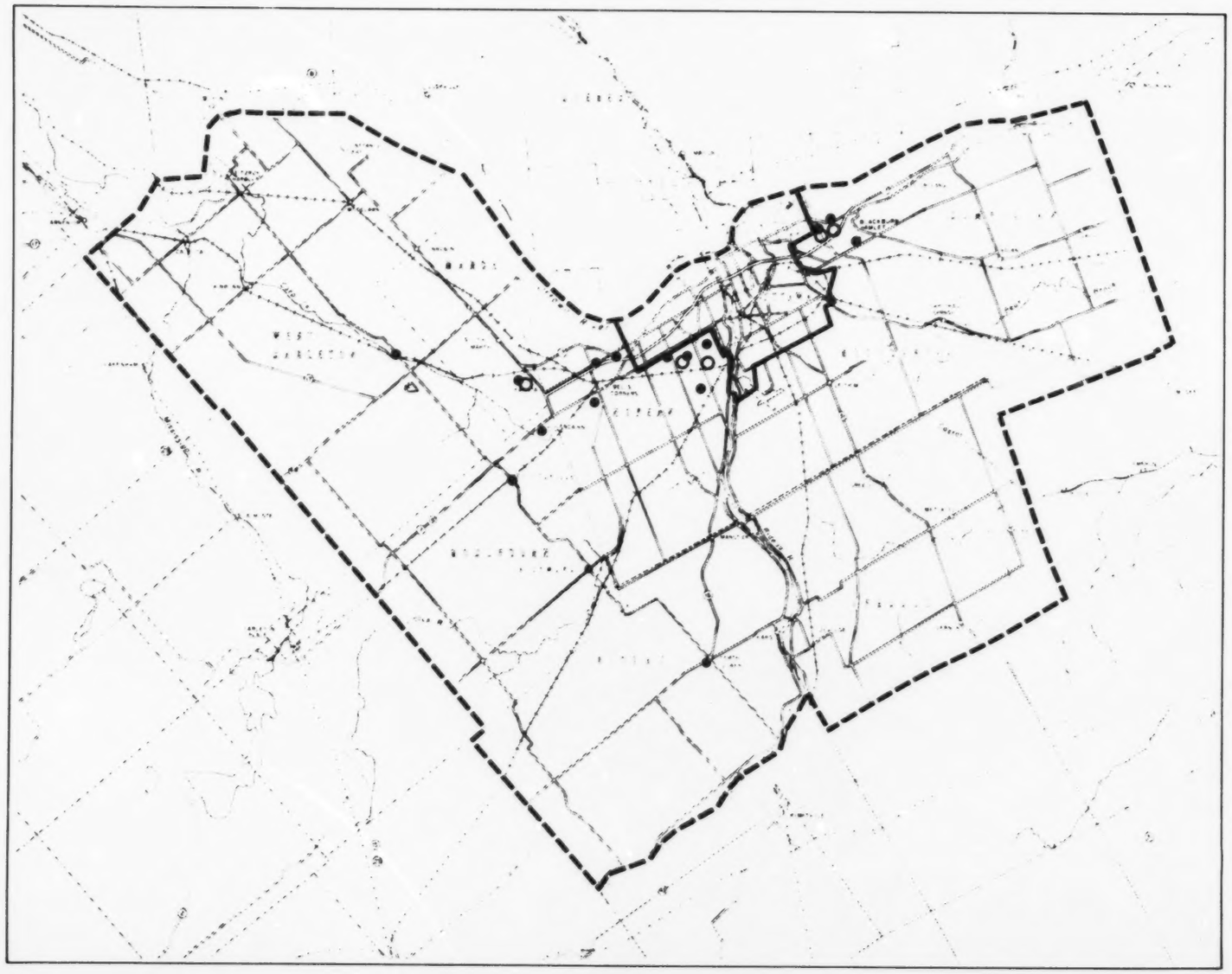
4 0 4 8

miles milles

MAP

22

CARTE



DAY NURSERIES
(OUTSIDE OTTAWA)

GARDERIES D'ENFANTS
(HORS D'OTTAWA)

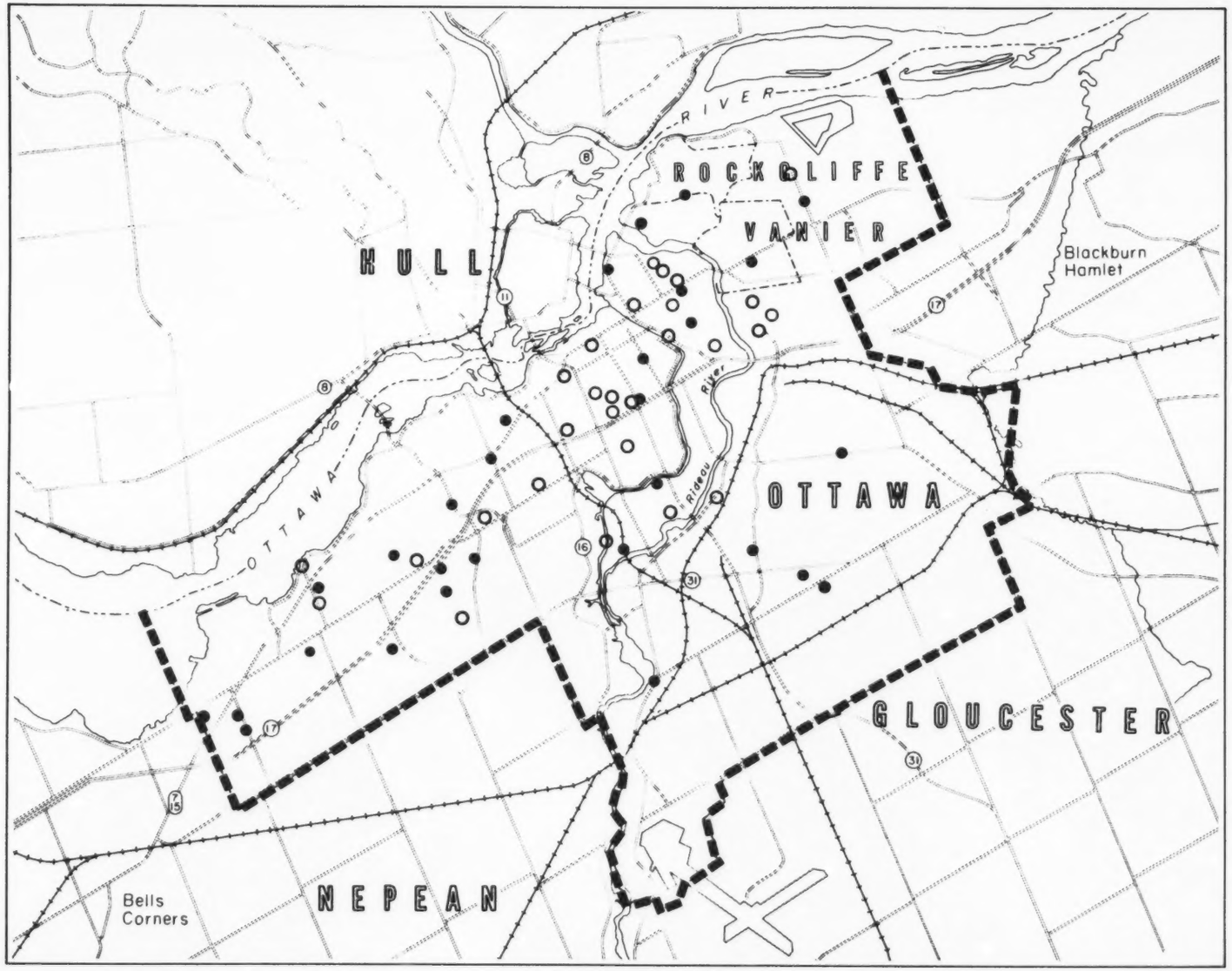
FULL DAY PROGRAM	○	A PLEIN TEMPS
PART DAY PROGRAM	●	A MI-TEMPS
BOUNDARY OF OTTAWA	——	LIMITE D'OTTAWA

1974

scale 1 : 400,000 échelle

4 0 4 8
miles milles

MAP
23
CARTE



DAY NURSERIES
(OTTAWA)

GARDERIES D'ENFANTS
(OTTAWA)

FULL DAY PROGRAM ○ A PLEIN-TEMPS

PART DAY PROGRAM ● A MI-TEMPS

BOUNDARY OF OTTAWA ■■■ LIMITE D'OTTAWA

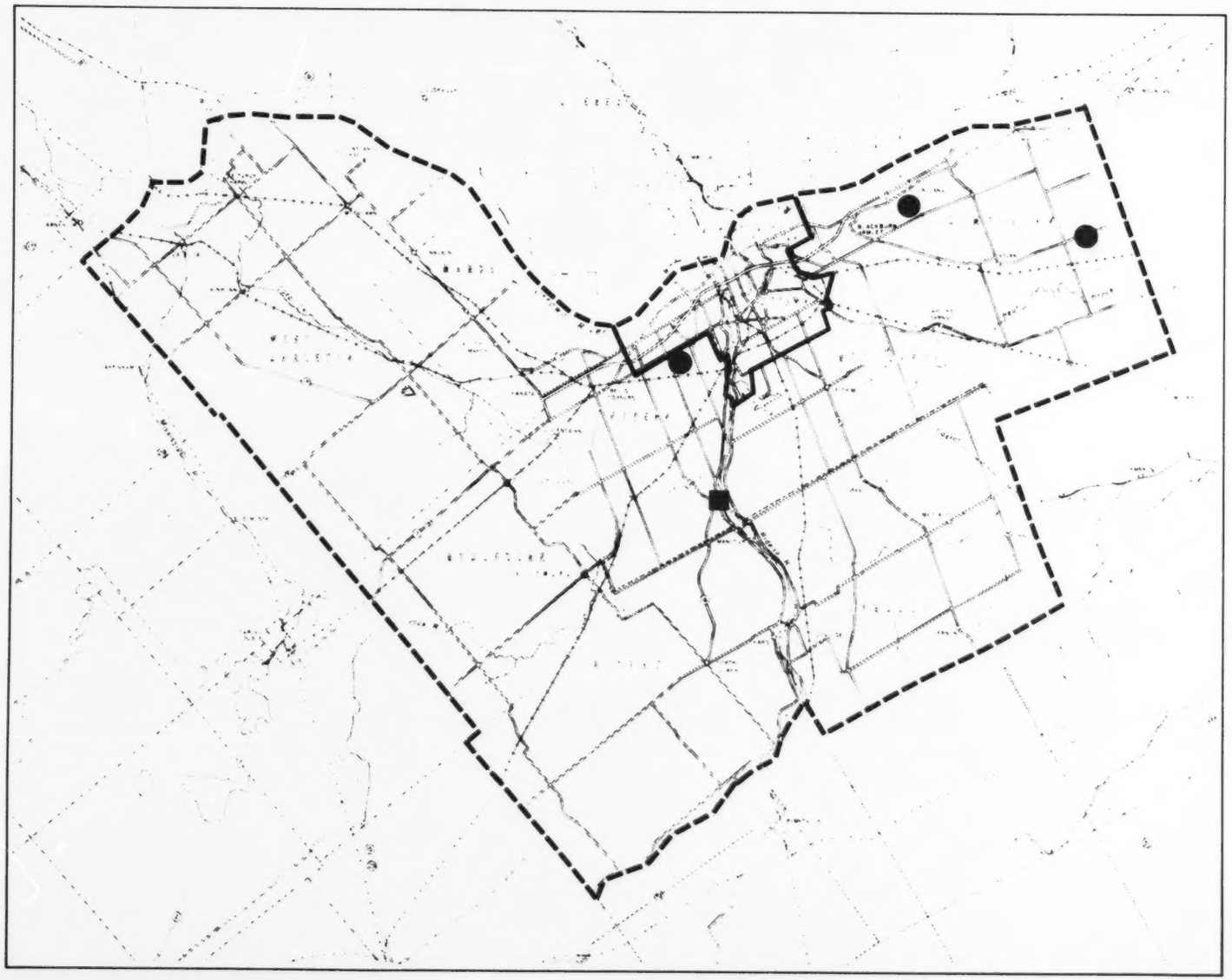
1974

scale 1:100,000 échelle

1 0 1 2

miles milles

MAP 24 CARTE



HOMES FOR THE AGED AND NURSING HOMES
(OUTSIDE OTTAWA)

FOYERS POUR PERSONNES AGEÉS ET CLINIQUES
(HORS D'OTTAWA)

OTTAWA-CARLETON HOME FOR THE AGED — FOYERS POUR PERSONNES AGÉES DE LA MUNICIPALITÉ RÉGIONALE

LICENSED NURSING HOMES — CLINIQUES RECONNUES

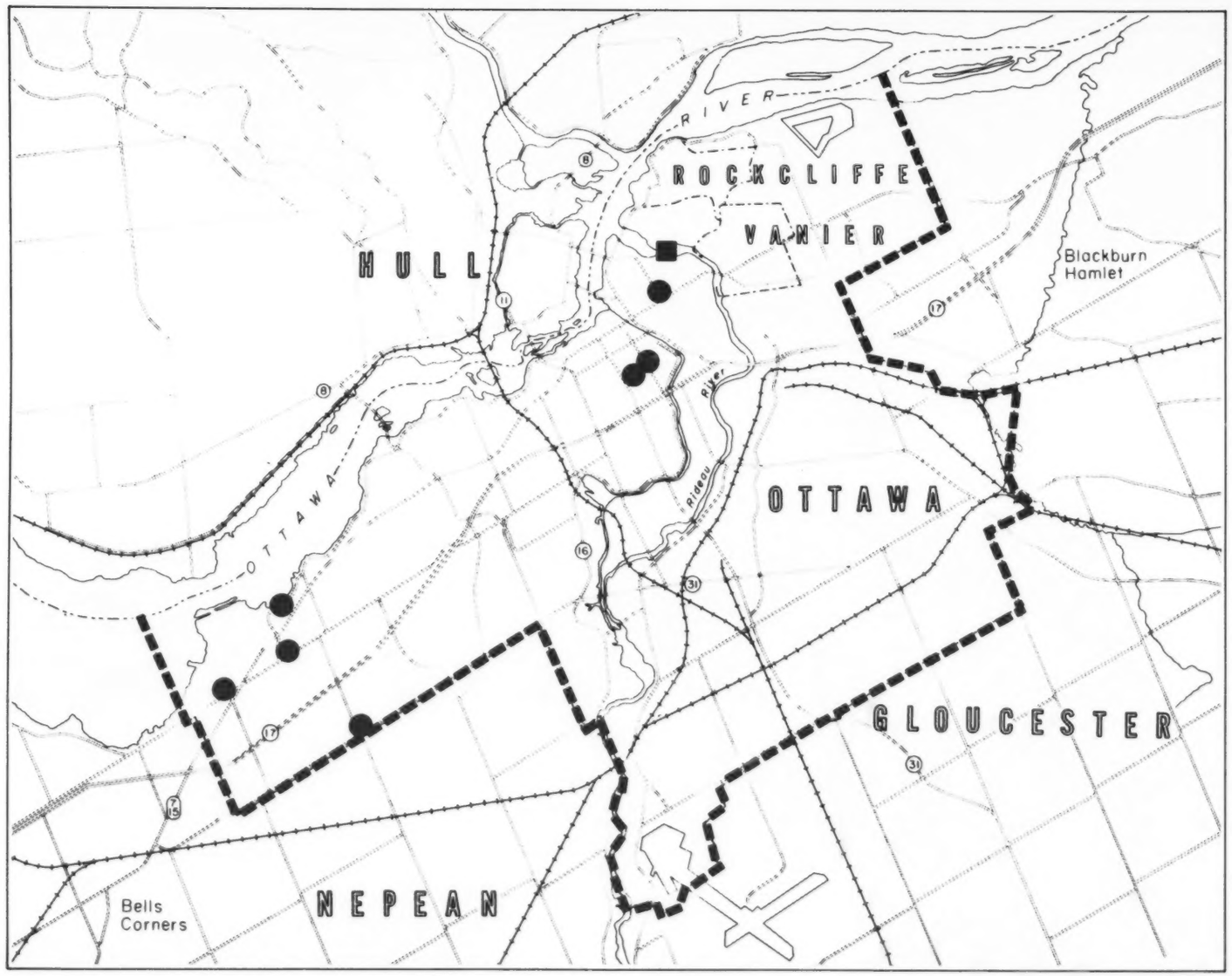
BOUNDARY OF OTTAWA — LIMITE D'OTTAWA

1974

scale 1 : 400,000 échelle

4 0 4 8
miles milles

MAP 25 CARTE



HOMES FOR THE AGED AND NURSING HOMES
(OTTAWA)

FOYERS POUR PERSONNES AGÉES ET CLINIQUES
(OTTAWA)

OTTAWA-CARLETON HOME FOR THE AGED — FOYERS POUR PERSONNES AGÉES DE LA MUNICIPALITÉ RÉGIONALE

LICENSED NURSING HOMES — CLINIQUES RECONNUES

BOUNDARY OF OTTAWA — LIMITE D'OTTAWA

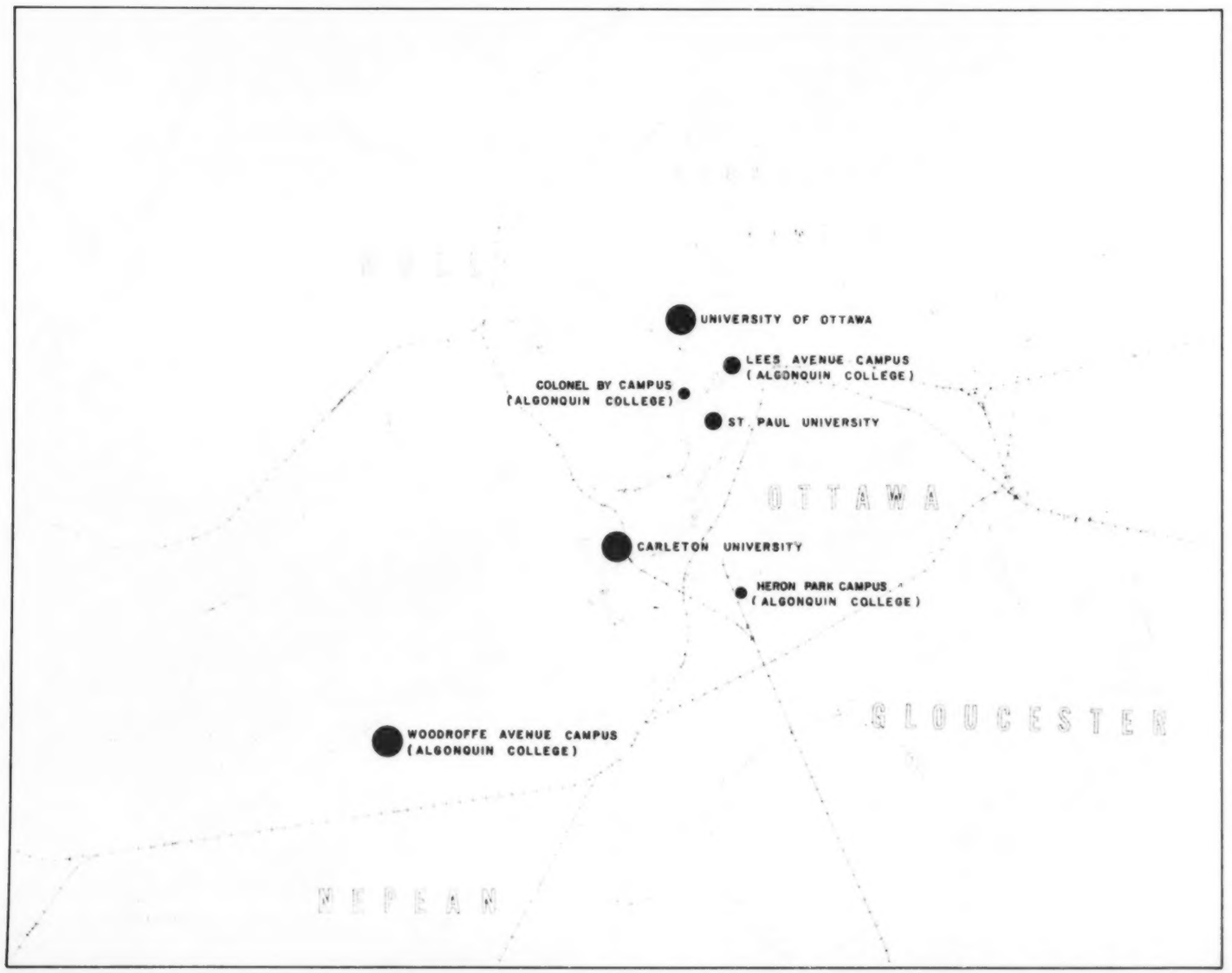
1974

scale 1:100,000 échelle

1 0 1 2

miles milles

MAP 26 CARTE



UNIVERSITIES AND COLLEGES OF ADVANCED EDUCATION

UNIVERSITÉS ET COLLÈGES D'ENSEIGNEMENT SUPÉRIEUR

SITE MORE THAN 50 ACRES — PLUS DE 50 ACRES
SITE 20-50 ACRES — 20 A 50 ACRES
SITE LESS THAN 20 ACRES — MOINS DE 20 ACRES

1974

scale 1:100,000 échelle

1 0 1 2
miles milles

MAP
27
CARTE

HIGH CAPABILITY SOILS FOR AGRICULTURE
(CLASSES 1, 2 AND 3)

SOLS TRÈS PROPICES A L'AGRICULTURE
(CATÉGORIES 1, 2 ET 3)

PREDOMINANTLY CLASS 1	CATÉGORIE 1 EN MAJORITÉ
PREDOMINANTLY CLASS 2	CATÉGORIE 2 EN MAJORITÉ
PREDOMINANTLY CLASS 3	CATÉGORIE 3 EN MAJORITÉ
PREDOMINANTLY CLASSES 4, 5, 6, 7 OR ORGANIC SOIL	CATÉGORIES 4, 5, 6, 7 EN MAJORITÉ OU SOLS ORGANIQUES
AREA NOT COVERED BY SURVEY	SECTEUR NON ÉTUDIÉ

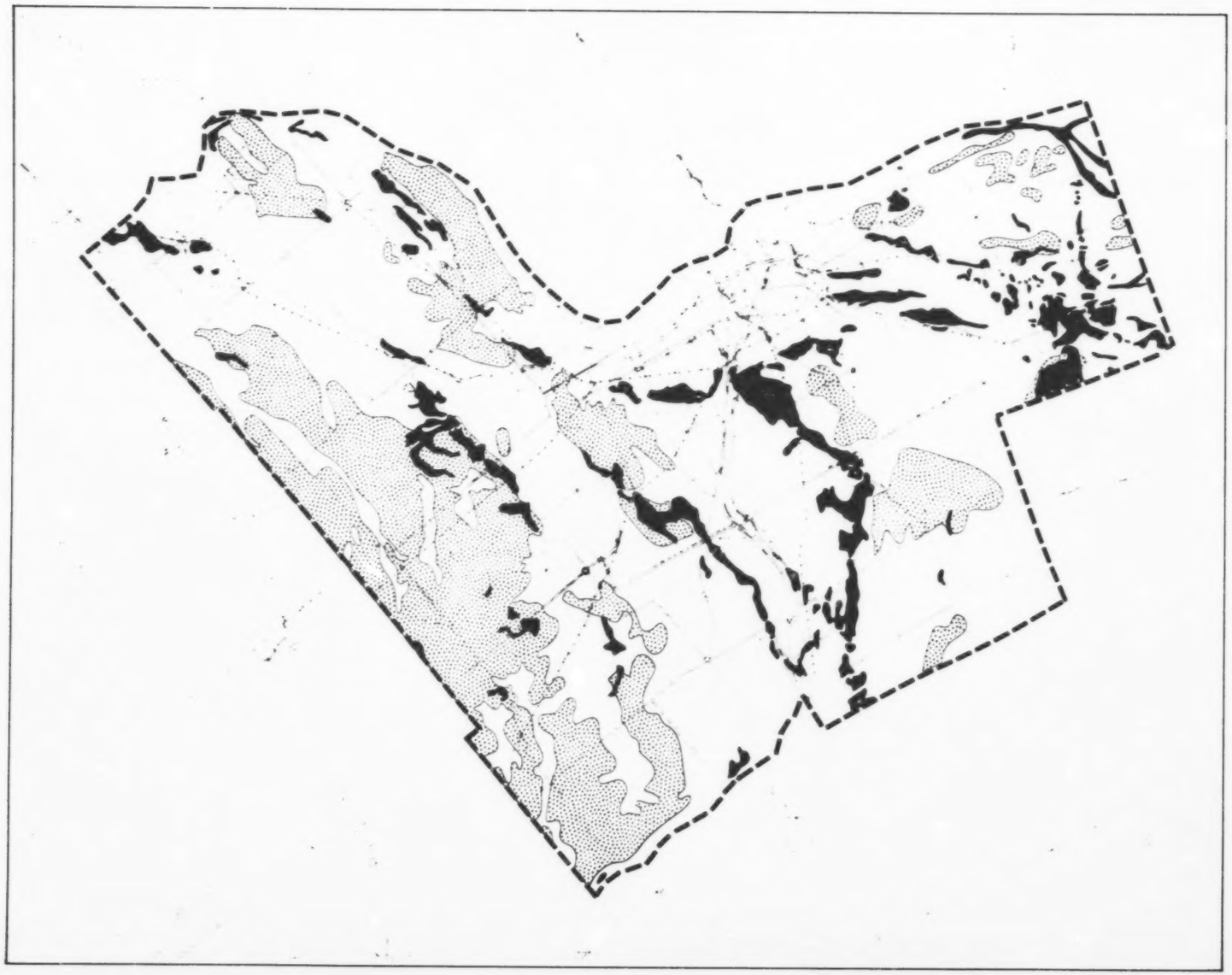
SOURCE: ARDA CANADA LAND INVENTORY
SOURCE: INVENTAIRE DES TERRES DU CANADA — ARDA

1974

scale 1 : 400,000 échelle

4 0 4 8
miles milles

MAP
28
CARTE



PRINCIPAL MINERAL DEPOSITS

DÉPÔTS MINÉRAUX

SAND AND GRAVEL POTENTIAL — TERRAINS AYANT UN POTENTIEL DE SABLE ET DE GRAVIER

LIMESTONE POTENTIAL — TERRAINS AYANT UN POTENTIEL DE CALCAIRE

1974

scale 1 : 400,000 échelle

4 0 4 8
miles milles

MAP
29
CARTE

MAPS NOT

FILMED

CARTES

OMISES